U.S. Department
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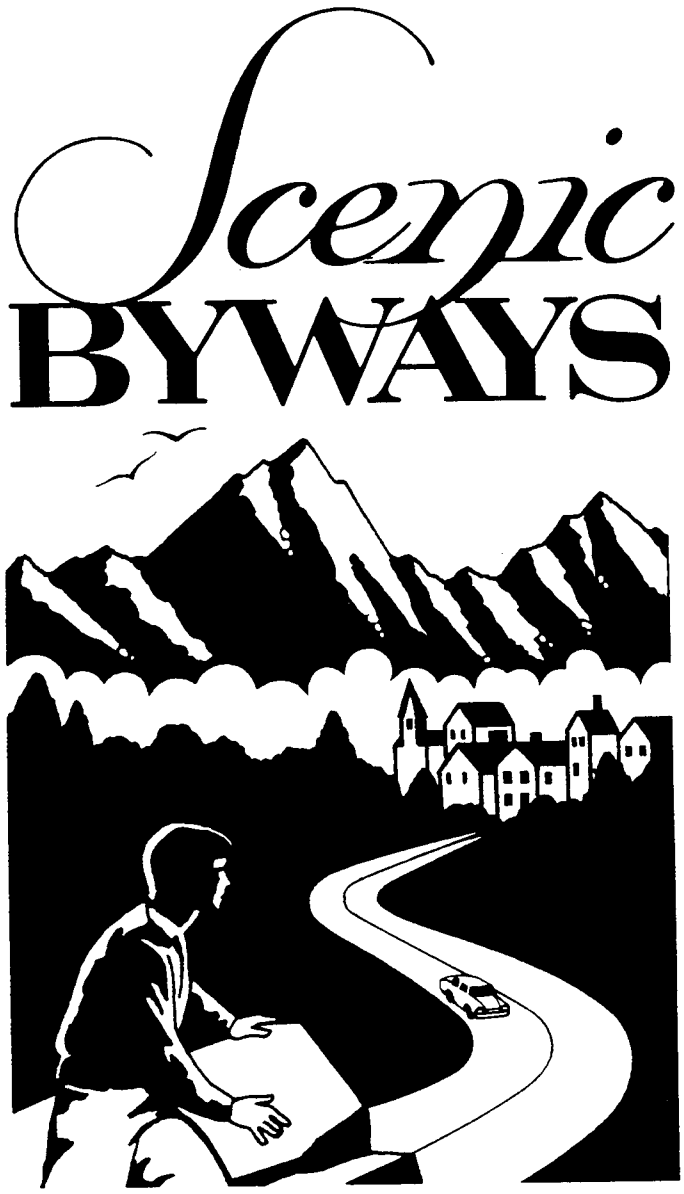
Federal Highway Administration

Final Case Study for the National Scenic Byways Study

Scenic Byways Development on the Oregon Coast
Economic Benefits and User Preference



September 1990

NOTICE

Final Case Study

for the

National Scenic Byways Study

SCENIC BYWAYS DEVELOPMENT on the OREGON COAST

ECONOMIC BENEFITS and USER PREFERENCES

SEPTEMBER 1990

Prepared for
The Federal Highway Administration

Submitted by
The Oregon Department of Transportation

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1. INTRODUCTION

The coast of Oregon, as one of the most traveled destination areas in the state, is experiencing steady growth in visitor traffic. This growth is resulting in expansion of travel-related business activity in coastal urban areas, additional visitor-related attractions development, and corresponding growth in highway traffic volumes for both urban and rural areas. There is also a growing realization that the coast of Oregon is a unique, irreplaceable resource which, if managed properly, can provide a wide variety of valuable recreation experiences for Oregon residents and for visitors from elsewhere in the U.S. or foreign countries.

Other trends which are important for transportation along the coast -- many of which also are of national significance -- include:

- the aging of American drivers and the attendant need for appropriate signing and highway design features
- increases in the number of recreational vehicles, bicycles and tour buses, all of which much share the highway environment with auto and truck traffic
- the need for scenic and recreational opportunities near major urban areas
- a continuing focus on highway safety and efficiency.

The Oregon Department of Transportation (ODOT) has recognized the special requirements of the coastal corridor for some time and has fostered a transportation research and planning effort which aims to provide for necessary traffic capacity increases while maintaining or enhancing the coast as a travel destination. ODOT seeks to develop a scenic highway corridor along the coast which protects aesthetic qualities while serving diverse transportation needs. This proactive approach makes use of Oregon's strong local land use planning legislation, the extensive public ownership of coastal lands, the extensive state park network on the coast, ODOT's commitment to highway access management, and a variety of parkway and safety design features.

Oregon, the other Pacific Coast states of Washington and California, and the entire U.S. share an opportunity to move forward with highway development along the Pacific Coast in a manner which allows for increased highway capacity while enhancing the entire corridor as a travel destination. The Pacific Coast is a resource of national and international significance, deserving of all the attention which time and funds allow. Orienting the highway planning and development process towards this end will maximize the benefits for coastal residents and business, as well as for those who visit and enjoy the coast's unique qualities.

Research Objectives

The primary focus is on better understanding the preferences of highway users on the coast and how these preferences influence further development of the scenic highway concept on US-101, and on the economic benefits which such scenic highway development can contribute to. The specific objectives are to:

- review pertinent literature on scenic byways in the U.S. and elsewhere and interpret these findings in terms of scenic byway development on the Oregon Coast
- describe highway user attitudes and preferences regarding scenic byway design issues, based on a survey of Oregon coastal travelers
- analyze the economic impacts of scenic byway development on the Oregon Coast
- recommend scenic highway development approaches which are most appropriate given traveler preferences and the magnitude of economic impacts

Research Limitations

Completing this project involved surveying a sample of Oregon Coast visitors, both Oregon residents and visitors from out-of-state, as well as gathering selected data on traveler use of scenic turnouts, a primary feature of scenic roadways. Due to the schedule of the project, which was dictated by the availability of funds and the deadline for report preparation, the time available for data collection was very limited, consisting of about two weeks around and including the Memorial Day weekend in 1990. Although procedures were used to gather a representative sample of travelers within this period, these travelers may not accurately represent all travelers to and on the Oregon Coast throughout the year. Although we would not expect that these travelers differ to any great extent in their attitudes regarding highways compared to travelers during other portions of the year -- based on our experience with studies of travel in Oregon and elsewhere -- the results of the study should be considered indicative and not necessarily representative of all travel on the coast.

Report Contents

After this introduction chapter, Chapter Two reviews the history of highway development for US-101 and its pertinence within a national perspective on scenic highways. Chapter Three reviews scenic byway issues and experiences in the U.S. as they pertain to the Oregon Coast, based on available published materials. Chapter Four presents the primary original research findings of the study and includes a review of research methodology. An analysis of scenic byway-related economic impacts appears in Chapter Five. Finally, Chapter Six reviews the primary findings of the project and discusses a series of recommendations for scenic byway development on the Oregon Coast.

2. US-101 IMPROVEMENT STRATEGY

This chapter reviews efforts of the State of Oregon to develop a comprehensive US-101 improvement strategy. The strategy is an effort on the part of the Oregon Department of Transportation to address the coastal corridor as a whole, an integrated system which serves as both a world class scenic and recreation attraction as well as a major transportation link for residents of the Pacific coast. The improvement strategy, outlined below, represents the first portion of a detailed corridor study which use statewide guidelines from the Oregon State Highway Division Highway Plan. This study will be used to link long term highway planning efforts to specific project development activities in the Department of Transportation Six-Year Highway Improvement Program.

The US-101 strategy development process included four phases of activity (a full description of this process is included in Appendix C):

1. data gathering and improvement strategy alternatives
2. presentation of alternatives at public meetings
3. strategy development
4. final report and presentation at public forums.

As a result of the US-101 improvement strategy process, a Parkway Concept integrating all elements of the coastal corridor was developed. The following information reviews the background and history of US-101, and US-101 Improvement Strategy and Parkway Concept development.

US-101 Background

US-101 is perhaps the only statewide route in which all Oregonians feel they have a vested interest. The route is an extremely diverse corridor in terms of land use, user groups, economic bases, and environmental factors. In addition, the roadway exhibits a number of current deficiencies which point to the need for an overall plan or strategy to guide improvement decisions.

Historically, US-101 has followed a pattern of fragmented development. In the year 1918, sections of highway existed between Astoria and Neskowin and from North Bend to the California border. A road connecting these cites was part of a system of state highways proposed by the Oregon Highway Commission of that era. Until 1931 the coast highway was known as the "Roosevelt Coast Military Highway". During 1931 the highway commission renamed the route the "Oregon Coast Highway". The coastal corridor was completed as a through route in 1932 with ferry service across the Alsea Bay, Yaquina Bay, Coos Bay, and Siuslaw and Umpqua rivers. Bridges crossing these

bodies of water were completed in 1936.

The Oregon Coast is a primary destination for both resident and nonresident travelers, with 62% of visitors to the state spending some or all of their time in the coastal corridor. Including certain adjoining roads, US-101 provides both beach and recreation access as well as serving as the major transportation artery for coastal residents. Along with parts of the coast of California and Washington, the coastal corridor in Oregon offers world class scenery and a variety of recreational activities.

While the linear nature of the coast paralleled by US-101 lends itself to consideration as a scenic corridor, the coincidence of road and scenery do not guarantee a desired scenic experience. Aesthetic considerations must be integrated into roadway design, fitting the road and landscape together to best enhance and protect the natural attributes of the coastal environment.

Competing demands on the roadway require an integrated approach which will serve both recreation and other transportation needs. Certain sections of the coast warrant preservation of certain roadway and off-road elements, require safe auto and bicycle access, yet need increased capacity. In other locations views could be enhanced with improved highway design. In areas where local and commercial traffic predominate, a key concern is to successfully integrate traveler and resident needs for safety and efficiency. In order to develop a comprehensive corridor improvement strategy the highway needs to be viewed as a functioning whole.

The term "Oregon Parkway" has been used because the design is not similar to parkways in the east which are located on federal land, do not allow trucks, have speed limits of 35 to 45 miles per hour, and have land use controls. The Oregon Parkway will have to support three deep water ports, truck traffic, and urban environments while enhancing US-101's scenic wonders.

The Oregon Parkway Concept arose out of the problematic nature of the coastal corridor and the US-101 Improvement Strategy process. Ideas generated from the early stages of the Improvement strategy effort pointed to the need to tie US-101 together, to develop a highway design that will be more efficient and promote compatible land use patterns, and to make improvements that would enhance and be compatible with the scenic wonders along the route's 360 miles. In particular, features such as urban parkway design or bypasses were identified in order to preserve and improve the overall attractiveness of urban areas, many of which rely upon tourism as a source for local economic activity. Furthermore, it appears that tourist promotional benefits may be gained by linking the highway and surrounding scenic areas and recreational activities by means of a scenic highway or parkway concept as developed in the improvement strategy process.

Improvement Strategy Development

Initially, four improvement strategy alternatives were developed for public review. These alternatives were designed to stimulate discussion concerning US-101 improvements among coastal residents and community leaders, and to encourage the consideration of the coastal corridor as an integrated entity. Prior to this activity the Oregon Highway Division made public contact with local governments only at the project level. The four alternatives were as follows:

- Status Quo: Improvements to US-101 are evaluated on a project by project basis with the project having the greatest current need given top priority. US-101 receives no special identity and is treated like any other statewide highway.
- Dispersion: This alternative evaluates improvements by their proximity to coastal feeder routes and traffic volumes.
- Urban/Economic: Improvements to US-101 are evaluated on the basis of location near major cities, and areas of recognized economic activity such as three deep water ports, along with connectors to feeder routes.
- Tourism: Access is improved to major scenic and tourist areas. This alternative recognizes that the ocean view portions of the highway are world class scenic destinations or major tourist areas.

The alternatives where presented at four public meetings during January 1988. The meetings attracted over 200 people who gathered to listen and comment. At these informative meetings the Urban/Economic and Tourism alternatives addressed the concerns of most meeting attendees.

The public also recommended the following specific highway improvements:

- Better signing
- Vegetation control to open scenic vistas
- Expand definition of scenic zones
- Feeder route improvements
- Left/right turn lanes at scenic turnoffs and parks
- Improved bicycle facilities
- More passing lanes
- More protection of scenic areas
- Coordinate with regional economic development strategies
- Resolve congestion in urban areas

Note that during the first round table meetings, ODOT staff introduced a very generic parkway design which addressed the need to beautify the highway, maximize its visual potential and assist access control in developing urban areas. Shortly after the conclusion of these meetings a visual management study was conducted in Lincoln County funded by the Oregon Department of Land Conservation and Development

(DLCD). The study developed a methodology to evaluate visual qualities and identified visual management techniques which could be used as a model by other communities.

Utilizing this study, and earlier public feedback, the Highway Divion planners developed the Oregon Parkway Concept (See Appendix A). They also combined public comments and elements of the Urban/Economic and Tourism alternatives to the US–101 Improvement Strategy. The strategy organized the coastal corridor into three improvement zones, each addressing the special needs and diversity of various coastal regions. These zones, which provide a framework for future US–101 improvement activities, include the following:

- Maximum Improvement Zones: These zones are primarily areas of recognized urban and economic importance, generally in urban areas though some rural areas are included. In urban areas, parkways, five lane sections, or bypasses will be considered. In rural areas, parkways or four lanes will be used.
- Limited Improvement Zones: These zones are focused on scenic sections of the roadway and are derived from the Tourism alternative. These are areas with direct visual access to the ocean and estuaries or mountain views and vistas. These locations are attractions or major destination points for coastal travelers and include scenic areas of national magnitude. These zones are areas where highway improvements must be compatible with or enhance scenic values. Improvements include expansion and channelization of scenic pulloffs, left and right turn lanes, passing lanes, and improved signing.
- Standard Improvement Zones: The remaining sections of the coastal corridor are incorporated in the Standard Improvement Zones. The major emphasis of improvement in these areas is to supply passing opportunities every five miles to eliminate capacity problems.

Upon completion, the improvement strategy was presented to the Transportation Commission for approval and then to the public for review and comment. Public forums were held in five coastal and four inland communities, during which the Improvement Strategy and Parkway Concept were presented. Public response at these meetings was favorable and supportive, with many communities expressing interested in the Oregon Parkway Concept. The Improvement Strategy has also been presented to several state agencies, including the Economic Development Department, the Land Conservation and Development Commission and its staff, to coastal organizations such as the Oregon Coast Association and the Oregon Coastal Zone Management Association, and to a number of community groups such as local Rotary Clubs. These groups supported both the strategy conclusions and proactive approach to coastal corridor development.

Subsequent US–101 Improvement Strategy Activities

As a result of the US–101 Improvement Strategy process, several activities have

been undertaken including a state funded US-101 Corridor Study, the Pacific Coast Scenic Parkway tri-state project, and several coastal community redevelopment efforts.

State Planning (Corridor Study):

The US-101 Improvement Strategy will be applied to the US-101 Corridor Plan which will describe the nature and character of the highway by analyzing traffic characteristics, capacity, alignment, width, accidents, pavement condition, off right-of-way activities, and economic development plans. In addition, highway problems and needs, both existing, mid-range, and future will be identified and specific project solutions recommended. Cost estimates will also be provided for identified improvements in order to evaluate the allocation of available funds. Note that the practice of utilizing community and local input will continue during the US-101 Corridor Plan. This proactive process includes the formation of Study Advisory Task Force Groups composed of representatives of the cities, counties, Ports, and Council of Governments.

State Planning (Pilot Studies):

Two pilot studies have been preformed by the University of Oregon, Department of Planning, Public Policy and Management, Community Planning Workshop. The first study examined access management issues in Coos County along US-101. It developed a methodology to analyze and map access, and made preliminary recommendations on access management strategies. The second study examined visual and vegetation management in Curry County. A very scenic section of US-101 was analyzed for its visual and vegetation management potential. Recommendations for visual enhancement and vegetation removal were the major findings of this study.

Lincoln Beach Parkway Project:

The Highway Division is in the process of constructing a parkway on US-101 along the Central Oregon Coast. The project, located between Lincoln City and Newport, will provide an application of the US-101 Parkway Concept which residents, visitors, and local governments can experience and evaluate. A two mile stretch through the community of Lincoln Beach will be widened to two travel lanes and a bicycle lane in each direction. In addition, there will be a landscaped median strip with openings at key locations for left or U-turns. Plants will be entirely native varieties. There will be three areas outside the normal roadway where large vehicles, such as motor homes and fifth-wheelers, can make U-turns. Construction will begin in August of 1990 and be completed in August of 1991.

Pacific Coast Scenic Parkway:

The states of California, Oregon, and Washington are discussing an effort to develop a Pacific Coast Scenic Corridor. This effort is focused on developing a corridor along the Pacific coast as a scenic roadway of national magnitude. With the process well underway in Oregon, the other two Pacific coastal states have also initiated activities. California has identified a "Flexible Corridor" concept including US-101 and Highway 1. The state of Washington is in the midst of a full US-101 analysis much like the process which has already occurred in Oregon. The Departments of Transportation for all three states have been communicating and meeting with a forum known as the Tri-State US-101 Council.

Local Communities:

Several coastal communities in Oregon have embraced the Improvement Strategy and Oregon Parkway Concept. Both the City of Florence in the Florence Visual Management Plan, and Lincoln City in the Year 2000 Development Plan have applied parkway concepts in their planning documents. In addition, the cities of Lincoln City, Seaside, Gearhart, and Brookings have requested a review of parkway designs for their communities.

3. SCENIC BYWAY LITERATURE REVIEW

As part of this project, a review of literature related to travel and scenic byways was undertaken. Out of this search a number of consistent themes and issues were discovered. This chapter reviews these themes and presents a summary by topic area, followed by a discussion of how these issues apply to the coastal corridor.

Scenic byway-related themes or issues include the following:

- scenic byway characteristics
- demand for scenic byways
- traveler route choice
- demographics and changing travel patterns
- demographics and recreational activities
- economic impacts of scenic byways
- highway design characteristics
- scenic highway development and preservation

A listing of the sources reviewed for the literature search is included in the bibliography at the end of this report. Of these sources one of the most useful was the material developed by the President's Commission on Americans Outdoors (1986). This collection of information provided helpful insight into the trends affecting Americans and their recreational pursuits. The additional literature specific to roadways primarily consisted of research conducted during the 1960's in response to national highway beautification efforts during those years.

There has been significant recent research regarding travel and tourism in Oregon. Several studies provide useful information about why travelers come to the state and the economic impacts related to their visits. As discussed in Chapter Two, the Oregon Department of Transportation has already undertaken or initiated studies concerning the development and enhancement of the US-101 environment. In addition, some coastal communities have begun to address US-101 visual management issues in the city planning process.

Scenic Byway Characteristics

Literature Review Summary:

Much of the material written about scenic highways includes in its introduction some definition of a "scenic byway". These definitions are best summarized in a Federal

Highway Administration (FHWA) document entitled Scenic Byways (1988), which includes the following list of characteristics which may be part of scenic byways or scenic corridors:

- streams, lakes, and wetlands
- striking stands of timber
- exceptional pastoral views
- unusual geologic formations
- outstanding coastal, mountain, foothill, and desert scenes
- dramatic urban scenes
- prairie, cactus, and wildflower areas
- cultural and historic landmarks
- diversity of recreational experiences

Generally, scenic byways incorporate several of the above characteristics along a designated route, thereby combining scenic, cultural, historic, and recreational elements for a complete travel experience. Access to and enjoyment of these characteristics is often supported by complementary facilities such as roadside rest areas, scenic overlooks, campgrounds, trails, interpretive displays and signing, among others.

The FHWA publication also identifies two other important aspects of a scenic byway. First, the scenic road should offer a diversity of recreational opportunities. Second, to provide the traveler with a balanced experience, the route should offer several changes in terrain, landscape, climate, and cultural and historic sites.

Pacific Coast Highway Application:

Excepting "dramatic urban scenes," which are not found in the coastal towns of Oregon, the coastal corridor encompasses all of the above characteristics. This scenic, cultural, and recreational diversity makes the coastal corridor an ideal candidate for designation as a nationally recognized scenic byway.

The most obvious appeal of US-101 as a scenic corridor is access to and views of Pacific coastal environments. Following Oregon's 360 mile coastline, the highway is characterized by segments which run directly adjacent to the Pacific oceanscape. In addition, for those portions of US-101 which do not directly border the ocean, views and access are available to estuaries, streams, numerous coastal fresh water lakes, as well as a variety of both salt and fresh water wetlands.

Long known as a timber producing region, the Pacific coast presents touring motorists with stunning stands of timber in the forested foothills of the coast mountain range. In addition, several sections of the highway run through agriculture areas, including operations such as sheep ranches and dairy farms, which offer the pastoral views

often associated with scenic roadways in other parts of the country. Other features of US-101 which contribute to the corridor's unique scenic beauty include the coastal mountain's meadows and wildflower areas and views of the many impressive offshore geologic formations born of the region's volcanic history.

In addition to diverse natural scenery, the coastal corridor also provides access to a variety of recreation activities including fresh and salt water fishing, sailing, windsurfing, surfing, hiking, and wildlife viewing. The region also offers a significant number of historical and cultural landmarks and attractions such as Fort Stevens, Fort Clatsop National Memorial, site of a Lewis and Clark expedition encampment, the Hatfield Marine Science Center in Newport, and a number of historic lighthouses. Historic markers are also found at turnouts along US-101 and many portions of the highway have been designated as historic under the state Scenic and Historic Highway program.

Finally, the communities through which US-101 and other coastal roads pass have important historic and cultural appeal. Within many coastal towns are historic buildings and sites, while some communities are themselves places of historical significance. Many artists have moved into towns along the coast and display their works in local galleries, while the forestry and fishing industries continue to play a significant role in the lives of coastal residents. It is common for the coastal corridor to provide panoramas of the docks and trawlers of the Oregon fishing fleet. For the urban traveler touring the Oregon coast, US-101 provides a glimpse of the small town life which is so much a part of the American heritage.

Considering the array of characteristics discussed above it is arguable that sections of the Pacific Coast Highway already function as a scenic byway. However, to fully integrate the diversity of the region it will be necessary to implement preservation of scenic sections, visual management and traffic planning in urbanizing areas, and add other improvements to the roadway which can maintain and enhance the coastal corridor as a scenic byway.

The Demand for Scenic Byways

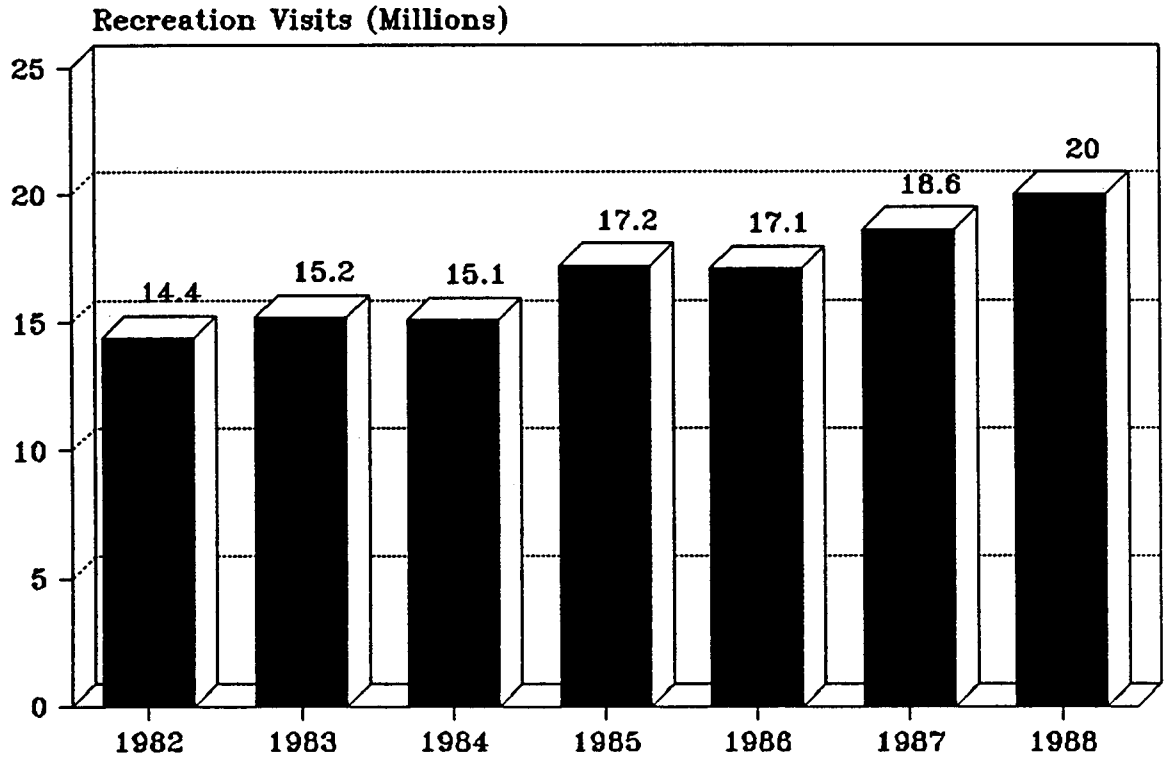
Literature Summary:

According to a study conducted for the President's Commission on Americans Outdoors, 77% of Americans drive for pleasure as a form of recreation, a number exceeded only by walking as a recreational pursuit. This high rate of participation is frequently mentioned in recent literature on recreation and scenic highways and was a staple of testimony before the Senate Subcommittee considering scenic byway legislation. This figure will reappear in other sections of this report.

Americans' ongoing love affair with the road certainly indicates an interest in

scenic byways. In addition, other data point to a growing demand for these special roadways. Figure 3-1 shows annual recreation visits to the National Park Service (NPS) administered Blue Ridge Parkway from 1982 to 1988. Growth in usage has been steady during these years, with a 39.3% total increase, or an average annual increase of 6.6% in use for this national scenic byway (NPS, 1988).

Figure 3-1
ANNUAL RECREATION VISITS, BLUE RIDGE PARKWAY, 1982-1988



In addition to visitation at national scenic byways, an apparent demand for these types of roadways can be inferred from other information. Of those who are likely to use scenic byways, good examples of recreation-specific travelers are recreation vehicle (RV) owners, motor coach tourists, and bicyclists. The interest which RV and bicycle users have in the scenic highways issue was evidenced by the testimony of RV and bicycle associations before the Senate Subcommittee on Foreign Commerce and Tourism, which reviewed scenic byway legislation in 1989.

Table 3-1 shows annual manufacturers shipments of recreation vehicles during the 1980's (Recreation Vehicle Industry Association, 1990). Shipments of recreation vehicles increased by 118% over the course of the past decade indicating a large and growing

number of current RV owners. In addition, from 1985 to 1989 the total number of multi-day motorcoach trips increased by 19.4% from 254,573 to 304,001 (National Tour Association, Inc., 1990). RVs and tour buses are a common sight along the nations scenic byways. Growing RV ownership and motorcoach tours, coupled with an aging population moving towards their leisure years, point to increasing demand for designated scenic byways.

Table 3-1
WHOLESALE SALES OF RECREATION VEHICLES, 1980-1989

Year	Number of Units
1980	181,400
1981	239,100
1982	258,000
1983	358,000
1984	398,200
1985	359,200
1986	379,500
1987	402,200
1988	427,300
1989	395,700

Other significant users of scenic byways are bicyclists. Bicycling is one of the nation's fastest growing recreational activities, with the number of adults who cycle regularly more than doubling from 10 million riders in 1983 to 23 million in 1989. The visual qualities and open space of scenic byways make this activity group likely consumers of the scenic byway resource. For those who bicycle tour or vacation by bike, participation has increased from .5 million adults in 1983 to 1.1 million in 1989, for an annual average growth rate of 10% per year with an additional 10% increase projected for 1990 (Bicycle Institute of America, 1989). Table 3-2 shows bicycle sales figures for the 1980's with an average of 10 million bikes purchased per year for the decade.

Table 3-2
ANNUAL BICYCLE SALES IN THE U.S., 1980-1990

Year	Number of Units (Millions)
1980	9.0
1981	8.9
1982	6.8
1983	9.0
1984	10.1
1985	11.4
1986	12.3
1987	12.6
1988	9.9
1989	10.7
1990 (proj.)	10.8

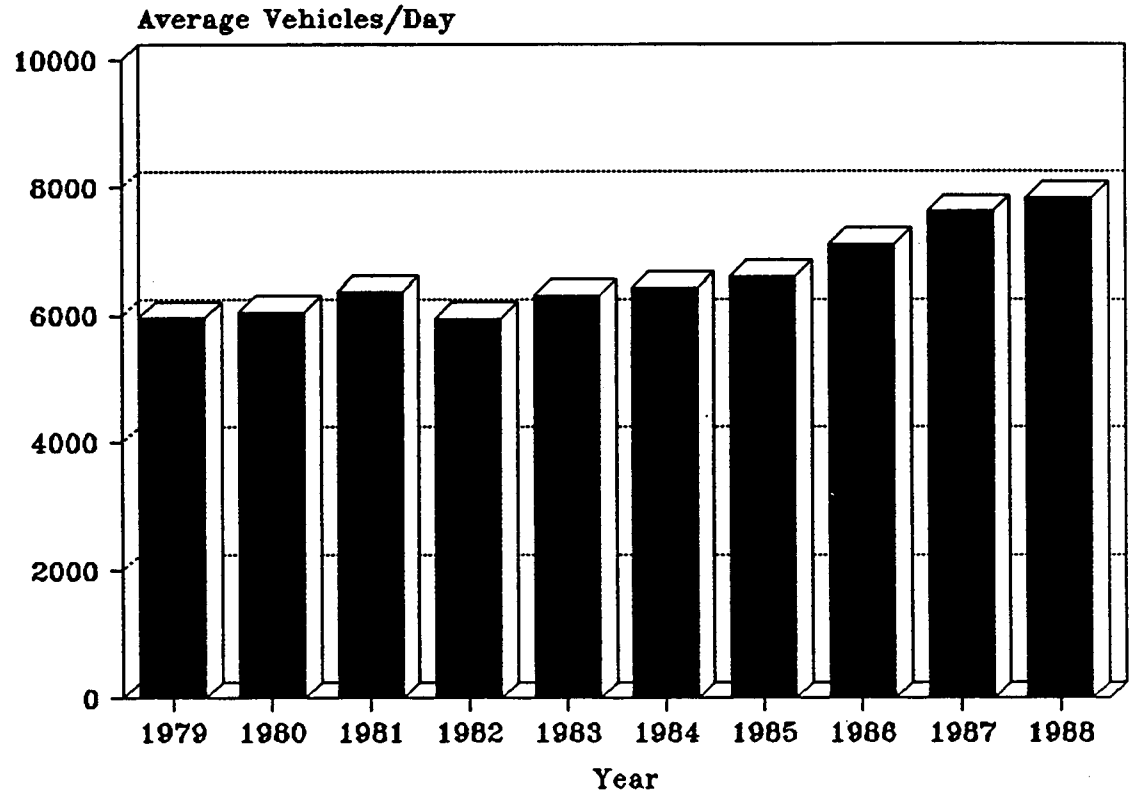
Pacific Coast Highway Application:

While data show growing interest in and use of scenic byways nationally, other findings demonstrate a significant interest in scenic byways throughout Oregon. The Oregon Department of Transportation participates with local communities and organizations in designating and signing scenic roadways. Local groups first nominate routes, and after state approval these routes are signed, with financial participation from the local level. Since the first route was signed in 1985, 40 scenic routes have either been signed or are under state consideration at the request of local communities, including sections of US-101. It is important to note that since this is a locally initiated process, the communities involved recognize the impact that designated scenic byways can have on the local economy. The people in these communities understand that travelers are attracted to identifiable scenic byways, and believe there is a demand for travel on these special roads.

Though the west coast states are blessed with a large number of scenic roadways, one of the most traveled scenic regions continues to be the Pacific coastline. Traffic counts for US-101 demonstrate growing usage. Figure 3-2 shows traffic counts for a ten year period near the congressionally designated Yaquina Head Outstanding Natural Area (Oregon Department of Transportation, 1989). As indicated, demand for access to the coastal corridor and the adjacent recreational and scenic resources has increased steadily over the past several years, with only a slight decrease during the recession of the early 1980's. This growing usage has placed increasing demands on the roadway which will

require significant improvement in order to maintain the quality of the travel experience along the coastal corridor.

Figure 3-2
TRAFFIC COUNTS, YAQUINA HEAD OUTSTANDING NATURAL AREA, 1988



Two-Way Traffic: Mile Post 133.31

Traveler Route Choice

Literature Summary:

Several studies have determined that travelers measure their experience with types of roadways and make choices in favor of routes which produce lower stress levels, such as scenic routes (Michaels, 1966; Ulrich, 1973). Furthermore, drivers will rate the scenic quality of the roadway and feel that as human intrusion increases the scenic qualities of the roadway become proportionally less appealing (Evans, 1980). As an activity, traveling a scenic roadway can be a fully aesthetic experience given a properly managed scenic

resource (Blair, 1985). Simply put, people pursue and enjoy scenic roadways and prefer an attractive natural landscape to one characterized by obtrusive development. Given the prevalence of pleasure driving and the preference for appealing roadways, it is not surprising that the designation and preservation of scenic byways has emerged as an issue in states across the country. More than just attractive scenery, these roadways appear to serve a purpose, to provide "food for the soul" by keeping an urbanized society in touch with its rural past and frontier heritage.

Pacific Coast Highway Application:

The Pacific Coast Highway, as discussed above, provides a full array of scenic qualities. Considering these many attributes, the coastal corridor functions for many travelers as a self-contained destination. For those travelers wishing to drive through Oregon to a particular destination, Interstate 5 provides the quickest and most direct route running north and through the state. However, the appeal of the Oregon coast and the offerings of the coastal corridor entice approximately 62% of visitors to Oregon to travel to or through at least one portion of the coast, even though the topography and location of the coast highway makes roadway travel a much slower proposition than the interstate (Dean Runyan Associates, 1989). We can assume that these travelers chose to travel US-101 because of the scenic, cultural and recreational experiences available along the way rather than for speed.

Findings regarding visitors attitudes toward Oregon as a destination show that the state's natural resources receive the highest scores of all the state's attractions. More than nine out of every ten travelers (96.4%) rate Oregon's scenery as exceptional or very good. Given these findings, the origin of a substantial portion of visitors from the urban areas of California and Washington, and the obvious scenic bounty of the coastal corridor, we can surmise that these visitors come to the Oregon coast, as well as their own coastal areas, to experience the region's beauty and to escape the pressures of urban areas. These other scenic sections along the coastal corridor include Highway 1 in California in the area of Big Sur and from Pt. Reyes to Mendicino, and in Washington on the Long Beach peninsula and in the Grays Harbor area. Therefore, in order to maintain the coast as a visitor attraction it is imperative that scenic corridors be maintained and city-like congestion avoided in the communities located along US-101.

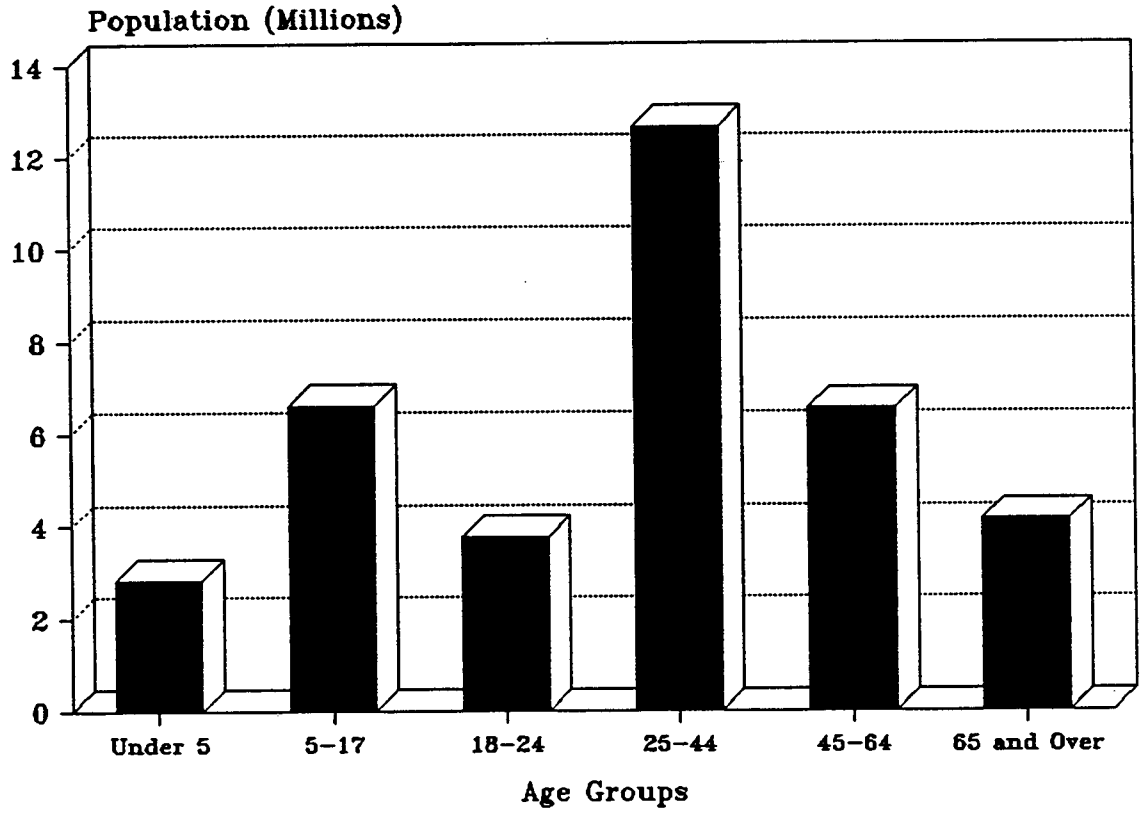
Demographics and Travel Patterns

Literature Summary:

Trends in travel patterns, like many other trends across the nation, are affected by the aging of the huge post war "baby boom" generation . Figure 3-3 shows the combined population distribution by age for California, Oregon, and Washington and clearly illustrates the dominance of the baby boom group. Mostly due to the prevalence of two

wage-earner families and the resulting time constraints placed on these families, the traditional week-long family vacation has been replaced by extended weekend trips. Constraining the time available for travel has generally meant that trips are closer to home (President's Commission, 1986).

Figure 3-3
POPULATION DISTRIBUTION BY AGE, WEST COAST STATES, 1990



While current travel patterns show a propensity for trips which are of short duration and close to home, a shift in these patterns is expected as the baby boom generation enters its late middle age years (President's Commission, 1986). Generally, incomes rise during the middle age years, and combined with a trend toward smaller family sizes this should mean a greater amount of discretionary income, some of which should go to travel. In addition, as the population ages the leisure time associated with retirement also increases. The combination of higher discretionary income and increased leisure time indicates that it is likely the baby boomer generation will take to the road and explore areas such as the coastal corridor in increasing numbers.

Pacific Coast Highway Application:

The Oregon coast is experiencing steady growth in visitation, due to a number of factors. First, much of the state's population is concentrated in the cities of Oregon's western valleys. Located approximately 60 miles from the coast, these major urban centers have shown significant levels of population growth during the later 1980's. This growth, due in large part to immigration, is projected to continue through the 1990's.

Residents of these inland cities frequently travel to the coast for pleasure or vacation trips. In fact, approximately 50% of the overnight travel and 85% of day travel within the state of Oregon is attributable to residents (Dean Runyan Associates, 1989). It should be noted that proportion of resident travel on the south coast is less than that on the north and central coasts, which are closer to major population centers. Nevertheless, in keeping with the above mentioned trend toward extended weekends and the relatively short travel time from the state's inland cities, the coastal corridor does function as an ideal weekend destination for Oregon residents.

The second source for increased visitation on the coast is travel by out-of-state visitors. Of those who visit Oregon, 62% spend some time on the coastal corridor. With California having experienced 14.0% growth in population between 1980 and 1986, and Washington a 8.0% population gain during the same period, the market for travel on the coastal corridor is likely to increase. Overall, nearly a third (30.2%) of out-of-state visitors live in California while another eighth (12.5%) are from Washington. In addition, another 10.8% of visitors arrive from the growing sunbelt states of Texas, Arizona, and Florida (Dean Runyan Associates, 1989).

Demographics and Traveler Activities

Literature Summary:

Other impacts of the aging traveler population concern recreational activities. Generally, as one ages their activity levels in certain rigorous sports declines while participation in less physically demanding pursuits increases. For example, one may give up the stress placed on leg joints by basketball or distance running in favor of low impact sports such as walking or bicycling. In fact, walking for pleasure is now considered a recreational activity by 84% of Americans. Bicycling is one of the fastest growing recreational activities in the nation with an estimated 90 million bicyclists in the U.S., with 23 million adults riding regularly (Bicycle Institute of America, 1989).

Though the type of activities may change as the post war generation ages, the level of activity is expected to remain high. This is especially so when compared to the activity levels of previous generations of Americans. Advancements in medical care and changes in lifestyle will keep many Americans active well into their later years. Most importantly,

the baby boom generation, despite the demands of changing urban society, has adopted an ethic of recreation. Leisure and recreation time is considered part of the American pursuit of happiness (Godbey, 1986; Tinsley, 1986).

The impact of demographic trends points to the interest in a national scenic highway system. As discussed above, driving for pleasure is a dominant recreational activity. For this reason alone scenic byways can serve as a significant recreational resource. However, when activities such as bicycling and walking, among others, are available in a scenic corridor, the corridor itself can become an attraction.

Pacific Coast Highway Application:

Table 3-3 shows the preferred activities of visitors to the Oregon coast. These data are from a study of travelers to Oregon completed for the Oregon Tourism Division, and include activities conducted in other parts of the state as well as the coast (Dean Runyan Associates, 1989). Though this is a statewide list of activities it does provide insight into the activity patterns of those who do visit the coastal corridor.

Recreational activities along the coastal corridor are well-suited for a population of aging travelers. While vigorous activities are available, most visitors to the coast prefer somewhat more passive forms of recreation. The vast majority of visitors to the Oregon coast participate in sightseeing and relaxing (89.0%) as a preferred activity, followed by small town shopping (62.6%), and visiting a museum or historic site (53.3%). Other activities with high participation rates include visiting friends and relatives (43.6%), hiking or walking (43.0%), picnicking (41.9%), and wildlife viewing and studying (30.9%). Popular coastal activities not directly listed in the survey include bicycling and beachcombing. Bicycling is likely part of the activities visitors listed as "other" while beachcombing is probably included with either hiking/walking or wildlife viewing and studying categories (Dean Runyan Associates, 1989).

It is not surprising that sightseeing is the most frequently listed activity by coastal travelers. The dramatic scenic vistas of the Pacific Ocean and adjacent countryside accessed by the coastal corridor are ideal attractions for the majority of Americans who consider driving for pleasure as a recreational activity. While simply driving the coastal corridor may be recreation in itself, the region also offers a full menu of other things to do including walking, bicycling, visiting museums and historic sites, shopping and wildlife viewing. Since most visitors to the coast prefer somewhat more passive forms of recreation, the coastal corridor is a well-suited destination for a population of aging travelers.

Table 3-3
ACTIVITIES OF COASTAL VISITORS

Activities	Percent of Respondents
Relax/Sightsee	89.0
Small Town Shop	62.6
Museum Historic Site	53.3
Visit Friends/Relatives	43.6
Hike/Walk	43.0
Picnic	41.9
Metro Shop	41.3
Wildlife View Study	30.9
Restaurant/Club	29.6
Camp	27.8
Other	25.6
Cultural/Art Event	15.9
Boat/River Run	15.4
Winery	11.3
Fair /Festival/Rodeo	10.2
Fresh Water Fish	7.2
Salt Water Fish	6.1
Golf	5.0
Attend Sports Event	3.6
Ski	1.6
Windsurf	1.3
Hunt	.5

Economic Impacts of Scenic Byways

Literature Review Summary:

In testimony before the Senate subcommittee on foreign commerce and tourism, a consistent theme presented by speakers concerned the positive economic impacts scenic byways could have on travel and tourism in rural communities. Testimony focused on scenic byways as a vehicle to get travelers off the interstate system and into rural areas,

thus infusing tourist dollars into the local economies. The scenic byways issue not only concerns drawing tourists to scenic regions but encouraging their return through designation and maintenance of scenic corridors (U.S. Senate Subcommittee, 1989).

In addition to tourist expenditures, some authors suggest that the economic impacts of scenic highways may extend to adjacent lands and to savings in road maintenance costs (Davidson, 1969; Thiel, 1968). While billboard companies and landowners who rent billboard space may be impacted negatively, land values in the area of a scenic parkway may rise. This assertion is based on an analogy to the experience with parks and other open space where prudent real estate investors are attracted to lands with pleasant surroundings. Apparently the "park effect" extends to parkways with the economic soundness of the George Washington Memorial Parkway as an example.

Unfortunately, no studies exist which compare the economic activity along a roadway before and after scenic byway designation. The four-state scenic byway effort undertaken by Kansas, Iowa, Missouri, and Nebraska will eventually include a before and after economic impact study, although results will not be available for some time (Smith, 1990). At present the economic importance of scenic corridors is best evidenced by the growing interest in scenic byways on the part of states and communities. In the state of Washington, for example, the Coastal Parkway Coalition cites economic diversification as a key justification for developing a scenic parkway along the Washington coast. Communities in this region are suffering severe economic hardship due to the erosion of traditional resource based industries such as wood products and commercial fishing. In particular, the wood products industry faces the challenge of declining timber supply due to efforts to preserve "old growth" forests. Tourism dollars, while not a sole remedy, can offset some of the economic dislocation in these communities (Coastal Parkway Coalition, 1990).

Pacific Coast Highway Application:

Tourism has long been an important component of economies in Oregon's coastal communities. However, due to declines in the commercial fishing and wood products industries, travel and tourism has become a critical issue in the region (Economic Research Associates, 1990). Travel and tourism related economic impacts on Oregon's coastal counties totaled an estimated $446 million of primary travel-related expenditures in 1988, generating 8,755 jobs (Dean Runyan Associates, 1989). See Table 3-4. This figure includes the impacts on the coastal portion of Lane and Douglas counties.

Table 3-4
TRAVEL-GENERATED ECONOMIC IMPACTS,
OREGON COASTAL COUNTIES, 1988

County	Travel Expenditures ($000)	Payroll ($000)	Jobs
Clatsop	115,437	21,112	2,416
Coos	37,097	6,116	764
Curry	40,494	6,614	829
Douglas (west)	17,316	2,803	293
Lane (west)	25,847	4,160	434
Lincoln	167,098	29,913	3,191
Tillamook	43,182	7,388	828
Total	446,471	78,106	8,755

Many of the businesses in Oregon's travel industry are operated by their proprietors, who, due to the nature of available data, are not reported in the employment figures above. A recent report of wages and proprietor incomes, "Employment and Proprietor Income in the Oregon Visitor Industry", indicated that more than seven in ten Oregon visitor industry businesses had at least one working proprietor, and that the median income of these proprietors in 1988 was $32,000 per year, well above the typical wage in the industry (Dean Runyan Associates, 1989). The median income findings from that study appear in Table 3-5.

Table 3-5
PROPRIETOR INCOME BY BUSINESS CATEGORY, 1988

Type of Business	Median 1988 Income ($/yr)
Hotels/Motels	33,300
Eating & Drinking Establishments	29,500
Recreation, Attractions, Wineries	35,000
Transportation, Gas Stations	30,000
Retail	33,700
All Travel-Related Businesses	32,000

Source: Dean Runyan Associates, 1989

The key to travel and tourism on the Pacific coast is US-101. The roadway is the principle route for those people who travel along and enjoy the region's stunning coastline. As discussed in chapter two, the highway serves both purposes of recreation and transportation and as a result has suffered from declining service levels at some locations. To maintain a viable travel and tourist industry over the long term, it is important that the qualities which brought visitors to the coast in the first place be maintained. Scenic preservation and highway enhancement are key to insuring that the coastal corridor remain an exceptional attraction.

The importance of maintaining the scenic qualities of the coastal corridor to the economies of local communities is best reflected by community response to the scenic parkway concept. In addition to positive feedback at Oregon Department of Transportation hearings, several communities have utilized parkway concepts in the planning process. The City of Florence Visual Management Plan and the Lincoln City Year 2000 Development Plan both address the travel and tourism industry in their use of the parkway concept. Other tourism-oriented communities have expressed considerable interest in participating in a US-101 parkway effort (Oregon Department of Transportation).

Highway Design Characteristics

Literature Summary:

Scenic byways attract a variety of travelers, including recreation vehicle and bicycle users, the aging, and the general traveling public. These users must coexist on the scenic byway, yet each has its own interests and needs with respect to highway design features. Table 3-6 lists various design feature preferences according to user groups. As indicated, RV users are concerned about highway design features which ease the operation of a large vehicle, safety features for the same reason, and passing lanes so as not to obstruct the pace of other vehicles. Other than their own experience, RV drivers usually do not have any special training in operating a large vehicle, for this reason the literature recommends a "forgiving" highway environment (Glauze, 1978).

Wind gusts are a particular problem for vehicles with large surface areas such as RVs, and as a consequence safety features such as warning signs and wide lanes in wind gust areas are recommended. Sudden changes in road conditions also cause RV drivers problems so adequate warning distance on signage is an issue. Passing lanes are a key feature necessary to accommodate large slow moving RVs; this feature is important both to RV owners and other drivers (Glauze, 1978). As discussed in Chapter Two and presented in Chapter Four, passing lanes are a high priority for drivers frustrated with travel behind the slower moving RVs; this is particularly so on scenic sections where the road is often two lanes and frequently includes many curves and hills with few passing opportunities.

Table 3-6
SCENIC HIGHWAY DESIGN FEATURES

Highway User	Preferred Design Features
Recreation Vehicles	• extra-wide lanes, especially in wind gust areas • signage warning of wind gust areas • passing lanes and turnouts • large radius curves • wide shoulders for vehicle breakdowns • additional warning distance for stops and roadway changes • additional uphill lanes
Bicycles	• wide shoulders or bike lanes • smooth debris-free surfaces • lower auto speeds • lower curve speed rather than curve straightening • preserve rural scenic roadside environment
Aging Travelers	• higher sign illumination for night travel • more and better rest stops on rural sections for driver fatigue
Travelers in General	• frequent scenic pullouts • passing lanes • adequately signed points of interest • recreation area access

Bicyclists require at least one design feature in common with RVs. Wide shoulders or bike lanes are important to those traveling by bike, in particular cyclists want these shoulders to have clean, smooth running surfaces. Note that separate bicycle paths are not a requirement for those touring by bicycle (Clarke, 1989; Kroll, 1976). However, casual recreational riders may be interested in a system of bicycle paths, perhaps linking the area's state parks or campgrounds. Finally, cyclists want to insure that scenic, pastoral roadside environments remain so, and stress that recreation versus transportation be the emphasis of scenic byways (Clarke, 1989; Fremont, 1990).

Aging travelers bring additional concerns to scenic highway design. Important to these travelers is sign design with legible typography and greater retroreflectivity for night travel. In addition, aging travelers of rural scenic roadways desire more frequent complementary facilities such as rest stops and turnouts.

The general public, which includes the above user groups, supports more scenic turnouts and scenic vistas, adequate directional signing to points of interest, interpretive signing, and access to recreation areas (FHWA, 1988; U.S. Senate Subcommittee, 1989). Travelers' concerns regarding aesthetic values and highway improvements are presented in the discussion of survey results in the next chapter.

Pacific Coast Highway Application:

Scenic highway design issues on the coastal corridor are the primary focus of this report, with the US-101 parkway concept presented in Chapter Two, and traveler survey findings reported in Chapter Four. Many of the recommendations discovered at US-101 strategy public meetings, and findings from the travelers survey, mirror issues raised in the literature. More passing lanes, additional bicycle facilities, better signing, vegetation control to open scenic vistas, and scenic area protection are some of the concerns presented by both residents and travelers to Oregon.

The challenge for the coastal corridor is to address both the transportation and recreation related demands on the roadway. Through this effort highway design decisions will necessarily focus on all scenic highway user groups and their needs in scenic highway development. In order to do this, a full range of highway design options must be implemented. The US-101 strategy and Parkway Concept present a framework for maintaining the coastal corridor as a scenic attraction of national significance while meeting the transportation and recreation needs of all types of highway users.

Scenic Highway Development and Preservation

Literature Summary:

The need to identify, preserve, and enhance existing scenic byways, rather than build new scenic roadways, was consistently expressed in the Senate Subcommittee hearings on scenic byway legislation. Considering budget restraints, this approach is the most cost-effective method of developing a national scenic byway system (U.S. Senate Subcommittee, 1989).

Partnership was a key theme in testimony on scenic highway legislation. Of the several programs at the national level, all are characterized by a significant amount of local participation in scenic byway identification and development. For example, the American Automobile Association has designated about 500 scenic routes nationwide.

These scenic routes are primarily identified by local club affiliates, members of the association, local chambers of commerce, state highway departments, local visitors associations, and other groups (U.S. Senate Subcommittee, 1989). The National Forest Scenic Byways Program of the U.S. Forest Service is another national program which involves affected local communities in the scenic byways process. The agency works with local tourism boards, economic development organizations, and businesses to develop and promote scenic byways (U.S. Senate Subcommittee, 1989). Several states including Wisconsin and Vermont permit local governments to initiate the designation of scenic byways (FHWA, 1988).

Without preservation and maintenance of scenic resources, the effort to identify and develop scenic roadways are meaningless. As stated in the Senate testimony: "Today's sophisticated tourists respond to such protection, and quite frankly expect it when they visit designated scenic locations. If irreplaceable natural, scenic, historic, and recreational resources are degraded or lost, the tourists originally drawn to these resources will go elsewhere" (U.S. Senate Subcommittee, William Whyte, p. 43, 1989). The literature presents a variety of preservation techniques (Blair, 1979; Duerksen, 1986; Inskeep, 1986; Levin, 1967; Smardon, No Date; FHWA, 1988). These techniques include the following:

- Acquisition of scenic easements
- Local zoning (city, county)
- Statewide zoning
- Comprehensive planning
- Wider than normal rights of way
- Outright acquisition of corridor areas
- Fee acquisition and leaseback
- Scenic corridor reservations
- Designation of special conservation districts
- Restrictive covenants in deeds

Of these methods, the most frequently mentioned techniques are the acquisition of easements and zoning. Scenic easements were used extensively by the National Park Service along the Blue Ridge Parkway in North Carolina and Virginia and the Natchez Trace Parkway in Alabama, Mississippi, and Tennessee (Levin, 1967). Many county and local governments now rely upon the communities' police powers to apply zoning regulations to scenic corridor preservation. Cities such as Denver, New Orleans, and Austin have applied overlay zones in scenic corridors to regulate building height, signage, and landscaping, and other impacts on scenic resources (Duerksen, 1986).

Pacific Coast Highway Application:

The current scenic highway designation system in Oregon utilizes two approaches. The first is initiated by local communities and groups to identify and propose scenic byways. In response to these proposals the Oregon Department of Transportation reviews the routes for safety and other considerations and works with local groups to finalize scenic route designation. Upon designation the funding for scenic highway signage is assumed at the local level, with signs manufactured and installed by the Department of Transportation. In cases where Forest Service roads are involved, federal, state and local jurisdictions cooperate to designate and sign appropriate routes. The Cascade Lakes Scenic Highway, established in 1989, is an example of this multi-jurisdictional approach to scenic highway development. The second scenic highway approach is the Scenic and Historic Highway Program. This program designates portions of the state highway system as scenic or historic if the feature is located within the right-of-way. The two approaches need to be integrated and extended beyond the right-of-way. A committee of state, local, and federal government agencies is exploring this opportunity.

An orientation towards partnership among different levels of government characterizes the existing US-101 parkway effort. As discussed in Chapter two, the coast parkway concept was developed through a dialogue between the Oregon Department of Transportation and citizens and government at the local level. In fact, two Oregon communities have utilized parkway-like concepts in planning efforts: the Florence Visual Management Plan, and the Lincoln City Year 2000 Development Plan. Of equal significance is the fact that the Pacific Coast Scenic Parkway project would be a multi-state effort requiring communication and cooperation among the states of California, Oregon, and Washington.

In Oregon, scenic corridor preservation will largely depend on the state's unique system of state-wide land use planning and public ownership of beaches and park lands. Cooperation among various government jurisdictions will characterize preservation efforts since zoning regulations are implemented at the county and local levels. The Lincoln City and Florence plans are examples of this process.

4. HIGHWAY USER ATTITUDES REGARDING SCENIC HIGHWAY DESIGN ISSUES

A primary objective of this project involved investigating the attitudes and preferences of highway users regarding scenic byway design issues, features, and other matters pertaining to further scenic byway development on the Oregon Coast. This chapter reviews the methodology for this portion of the research and discusses the research findings. An additional section at the end of the chapter reviews the findings regarding scenic pullout use by highway travelers.

In general, surveyed travelers view the coastal corridor as a self-contained destination, with a majority traveling specifically to visit the region. In addition, these people spend nearly a third of a visitor day traveling on US-101, which makes the roadway itself, and the sights it has to offer, a primary recreational activity. Travelers are chiefly concerned with traffic congestion and visual resource improvements, yet are relatively unconcerned about getting to their destination quickly. It appears that the speed in getting between two points is not particularly important, but the environment or atmosphere in which one travels between two points is very important. Travelers on scenic corridors want the feeling of the open road, freedom from congestion, and perhaps a change from fast-paced urban lifestyles. In this sense, scenic places such as the coastal corridor do provide a busy society with "food for the soul".

Data Collection and Analysis Methodology

The research involved gathering data from a stratified, randomly selected sample of travelers on the Oregon Coast, employing a self-administered questionnaire which respondents filled out and returned at the time of the interception. A copy of the questionnaire appears in Appendix B.

The sample was stratified in order to assure adequate representation of a) Oregon residents and out-of-state visitors, and b) each of the three primary sections of the coast, and c) the distribution between week-day and weekend-day travel. The sample was drawn from travelers who had stopped at a scenic pull-out, wayside or visitor attraction on the coast, which assures that most of the respondents are traveling on the coast as part of a pleasure trip. In-county residents were not surveyed at respective intercept sites in order to insure that incidental travel was not part of the survey sample.

The sample design, which intended to gather a total of 600 completed questionnaires, is shown in Table 4-1. This design represents each portion of the coast equally, allowing for regional analysis of the findings; for purposes of coast-wide analysis the data are weighted in order to represent the proper proportions of travel on each section of the coast.

Table 4-1
RESEARCH SAMPLE DESIGN

	Oregon Residents		Out-Of-State Visitors		Total Sample
	Weekend	Week day	Weekend	Week Day	
North Coast	50	50	50	50	200
Central Coast	50	50	50	50	200
South Coast	50	50	50	50	200
Total	150	150	150	150	600

The distribution of respondents approximates the sample design, but did not achieve complete sample size in the South Coast due to limited travel volumes, related to inclement weather, on the coast during the days when the research staff were in the field. The distribution of respondents is shown in Table 4-2. It should be kept in mind that, while sampling was done by region of the coast, many respondents in fact have traveled through two or three sections of the coast, and the attribution of each respondent to a specific coastal section is artificial to the extent that such a travel pattern exists. The achieved sample is approximately equally distributed between Oregon residents and out-of-state visitors and between week days and weekend day, as intended. The distribution by region of the coast, however, is skewed to the North Coast, due to the weather-related shortfall on the South Coast. The larger-than-anticipated sample for the North Coast is due to extra sampling in this area at the end of the data collection period in an attempt to make up for the South Coast sample shortfall.

Table 4-2
COASTAL TRAVELER RESPONDENT DISTRIBUTION

	Oregon Residents		Out-Of-State Visitors		Total Sample
	Weekend	Week day	Weekend	Week Day	
North Coast	58	60	58	68	244
Central Coast	50	42	42	38	172
South Coast	49	15	20	34	118
Total	157	120	117	140	534

Weighting for purposes of data analysis involves only the coastal location of the respondent intercept, since the distribution of the sample with respect to the other two stratification variables appears adequately close to the preferred distribution. In order to properly represent the distribution of travelers with respect to coastal regions a weight was calculated and applied which in aggregate represents each region of the coast the same as the coastal distribution of travel-related employment as reported in Travel and Tourism in Oregon, 1988. This employment distribution is an acceptably reliable measure of travel activity for each section of the coast. These weights result in relatively minor changes, increasing the influence of the Central Coast subsample and reducing the influence of the North Coast subsample. These weights are used whenever coast-wide analysis is conducted. For breakouts by region of the coast the unweighted data are used.

Travel Patterns on the Coastal Corridor

The majority of travelers come to the coast primarily to visit the area. As shown in Table 4-3, 74.8% of all respondents embarked on their current trip primarily to visit the Oregon coast, with an additional 21.7% visiting the coast as one of several destinations; 3.5% were passing through the coast region on their way to another destination. These findings indicate that the coastal corridor functions as a self-contained travel destination. As might be expected, resident travelers to the coast have focused their trip on the region to a greater extent than nonresidents. Of residents, more than eight in ten (84.7%) left home primarily to visit the coast, with about two-thirds of nonresidents (64.8%) responding in kind.

Residents, who may be traveling for a weekend or short trip, are likely to center their travel plans on a single destination rather than multiple destinations (11.4%). In comparison, nonresidents are more likely to visit several destinations during their travels (32.2%). Significantly, only 3.9% of residents and 3.0% of nonresidents are just passing through the coast on their way to another destination. This indicates that even for those who are visiting other places, the coastal corridor is a key part of their travel itinerary.

Table 4-3
TRAVEL PATTERNS ON THIS TRIP BY RESIDENT/NONRESIDENT

Trip Description	Resident Travelers	Nonresident Travelers	All Travelers
Primarily to Visit the Coast	84.7%	64.8%	74.8%
Traveling to the Coast and Other Destinations	11.4%	32.2%	21.7%
Passing Through the Coast to Other Destinations	3.9%	3.0%	3.5%
Total	100.0%	100.0%	100.0%

Table 4–4 shows the proportion of the travel day spent in each of three locations or activities on the coast. Overall, the travel day was fairly well distributed between time in a town or city (37.6%), time traveling on US–101 or other coastal roads (30.2%), and time spent at a park, on the beach, or at another location (32.2%). It is significant to note that nearly one–third of a visitor day is spent traveling on US–101. The road itself, and the sights it has to offer, are key components of what people do on the Oregon coast. The impact of the roadway as a travel experience should not be surprising given that 89.0% of previously surveyed visitors to the coast list sightseeing as a preferred recreational activity in Oregon (Dean Runyan Associates, 1989).

For all travelers, the time spent in a town was slightly greater than time spent in other places. This is particularly true of travelers on the north Oregon coast, who spent 40.6% of their day in a coastal community. North coast travelers spend about the average amount of time (30.8%) on US–101, and a slightly smaller proportion of their day (28.6%) at a park or attraction. Central coast travelers spend about the average proportion of time in each location, with a slightly greater percentage spent in towns than either on the road or at an attraction. South coast visitors spend a greater percentage of their day (40.4%) at a park or attraction than do travelers on other coastal sections. These travelers also spend somewhat less than the average percentage of time on the road (24.8%) or in a town (34.8%). These findings reflect the more urban nature of the north coast and the more rural nature of the south coast and its extensive stretches of ocean beach. See Table 4–4.

Table 4–4
PERCENT OF DAY SPENT AT LOCATION BY COASTAL REGION TRAVELED

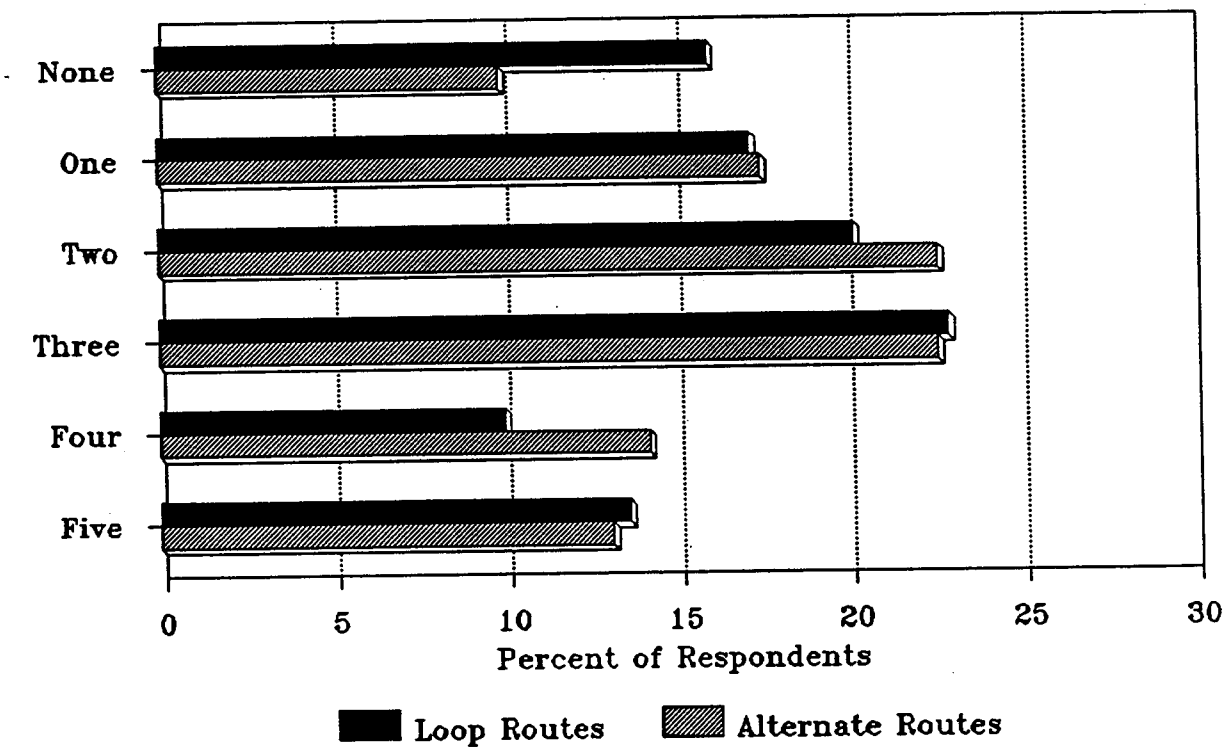
Location	North Coast Travelers	Central Coast Travelers	South Coast Travelers	All Travelers
Inside Town or City	40.6%	36.1%	34.8%	37.6%
Traveling on US–101 or Other Coastal Roads	30.8%	31.8%	24.8%	30.2%
At State Park, on the Beach, Other Attraction	28.6%	32.1%	40.4%	32.2%
Total	100.0%	100.0%	100.0%	100.0%

Traveler Use of Scenic Routes

The greatest proportion of travelers take a scenic route two or three times for every five trips, or about one scenic route every other time they drove for pleasure. In order to ascertain how frequently travelers use scenic routes, respondents were asked to indicate,

out of the last five trips they drove for pleasure, on how many trips did they use a scenic route. Two categories of scenic routes were given, including loop routes which begin and end in one place, and alternate routes which travelers can take towards their destination instead of a major highway. Figure 4-1 shows the comparison between these types of roads. Since many sections of US-101 function as a scenic route, and since there are several scenic loops available off the coastal corridor, these findings are important. They indicate that the potential exists for scenic route development on sections of US-101, and on loop and alternate scenic routes which can be accessed off the highway. The development of scenic alternates and loops may be particularly important considering the substantial amount of repeat travel that characterizes travel and tourism in Oregon.

Figure 4-1
SCENIC ROUTE USE DURING LAST FIVE TRIPS

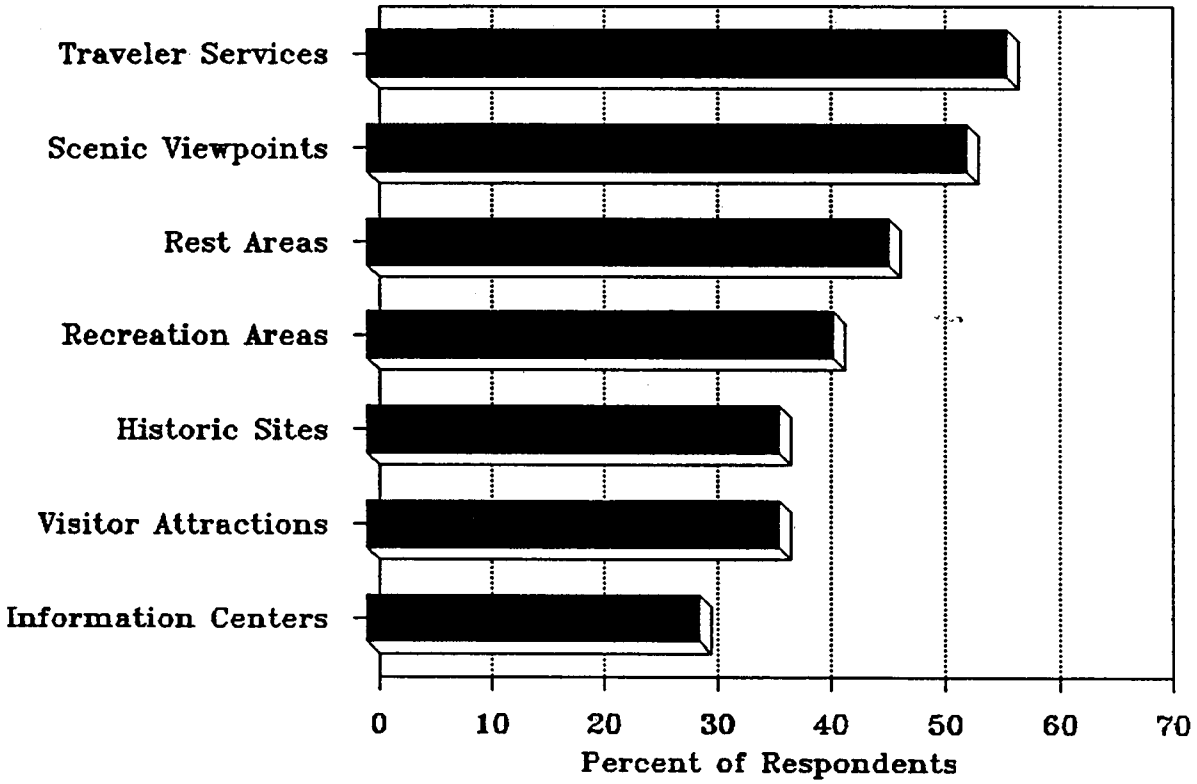


Traveler Use of Signage

When traveling in areas such as the coastal corridor, travelers frequently make stops at various places along the road because they see a sign. Figure 4-2 shows places where travelers "nearly always" or "often" stop due to signage. Travelers make stops most frequently at travel services, including lodging, restaurants, and auto service stations

(56.4%). Note that these stops are likely due to both highway informational signage as well as roadside signs located at an establishment. The next most likely places people stop due to signage are scenic turnouts (52.9%), rest areas (46.1%), and state parks or other recreation areas (41.3%). The finding that a substantial proportion of people rely on signage to find scenic turnouts and recreation areas points to the importance of signing in the coastal corridor for the area's scenic and recreational resources. Other places travelers stop "always/often" due to signage include historic sites (36.5%), visitor information centers (29.5%), and commercial attractions (21.1%). See Table 4–5.

Figure 4–2
STOPS DUE TO ROAD SIGNS "ALWAYS/OFTEN"



Further insight into sign usage can be gained from comparing this information with visitor characteristics such as age. Table 4–5 shows the proportion of travelers who stop "always/often" because of signs by age category. Of all age groups shown, the greatest reliance upon road signs occurs for those 55 and over. This age group uses signage most frequently for travel services (64.9%), scenic turnouts (61.6%), rest areas (57.8%), and visitor information centers (41.4%). Other places show little difference in usage by age

group due to signage. The implication of this finding is that for certain particular places, older travelers rely on signage to fully utilize a travel destination. Therefore, scenic route development in the coastal corridor should pay attention to this need in sign system development so that sign design considers the special needs of older travelers. This thrust may become even more important in the future as the post war "baby boom" generation approaches its later years.

Table 4-5
STOPS DUE TO ROAD SIGNS "ALWAYS/OFTEN" BY AGE

	Percent of Travelers			
Place Stopped	Under 35	35 to 54	55 or Over	All Travelers
Highway Rest Areas	37.9%	43.7%	57.8%	46.1%
Scenic Turnouts	48.8%	48.9%	61.6%	52.9%
State Parks, Recreation Areas	45.9%	36.4%	43.9%	41.3%
Historic Sites	36.0%	36.7%	38.5%	36.5%
Commercial Attractions	23.0%	20.6%	18.2%	21.1%
Visitor Information Centers	23.4%	26.1%	41.4%	29.5%
Travel Services	40.4%	54.7%	64.9%	56.4%

Traveler Perceptions of US-101

In order to understand travelers' perception of the travel experience on the coastal corridor, respondents were asked to a) rate a list of pleasure trip attributes in terms of their **overall** preferences for travel and recreation, and b) rate the US-101 area according to these same attributes. (See questionnaire in Appendix B). The difference between these scores provides a relative rating for US-101 with respect to these attributes.

Those surveyed were asked to mark, on a scale of 1 to 7, the importance of the listed attributes with regard to how each attribute contributes to **creating the most pleasurable trip possible**. This scale essentially measures the traveler's expectations for an **ideal** pleasure trip. Respondents also rated business trips in the same manner. Then, later in the survey instrument, respondents rated their **actual** experience traveling in urban and rural areas of US-101, using the same list of attributes. The end result is a comparison of the expectations for pleasure travel with the reality of travel on the coastal corridor.

Table 4–6 shows the difference in expectations for pleasure and business travelers. While pleasure trip attribute ratings range somewhat uniformly over a scale from the most important (at 6.4) to the least important (at 3.9), business attribute ratings tend to cluster at either very important or very unimportant. Four important business trip attributes stand out: avoiding congestion (6.2), well–maintained roads (6.2), quick arrival at destination (6.2), and convenient roadside services (5.4). The remainder of trip attributes are relatively unimportant to the business traveler who is, not surprisingly, interested in a quick, efficient trip. Other than quick arrival, important business trip attributes are also rated highly by pleasure travelers. Because the priorities of business travelers are so clearly delineated, and because the primary focus of the survey was scenic highway use, only pleasure trip ratings were used for comparisons with US–101.

Table 4–6
TRAVEL ATTRIBUTES IMPORTANT TO PLEASURE AND BUSINESS TRAVELERS

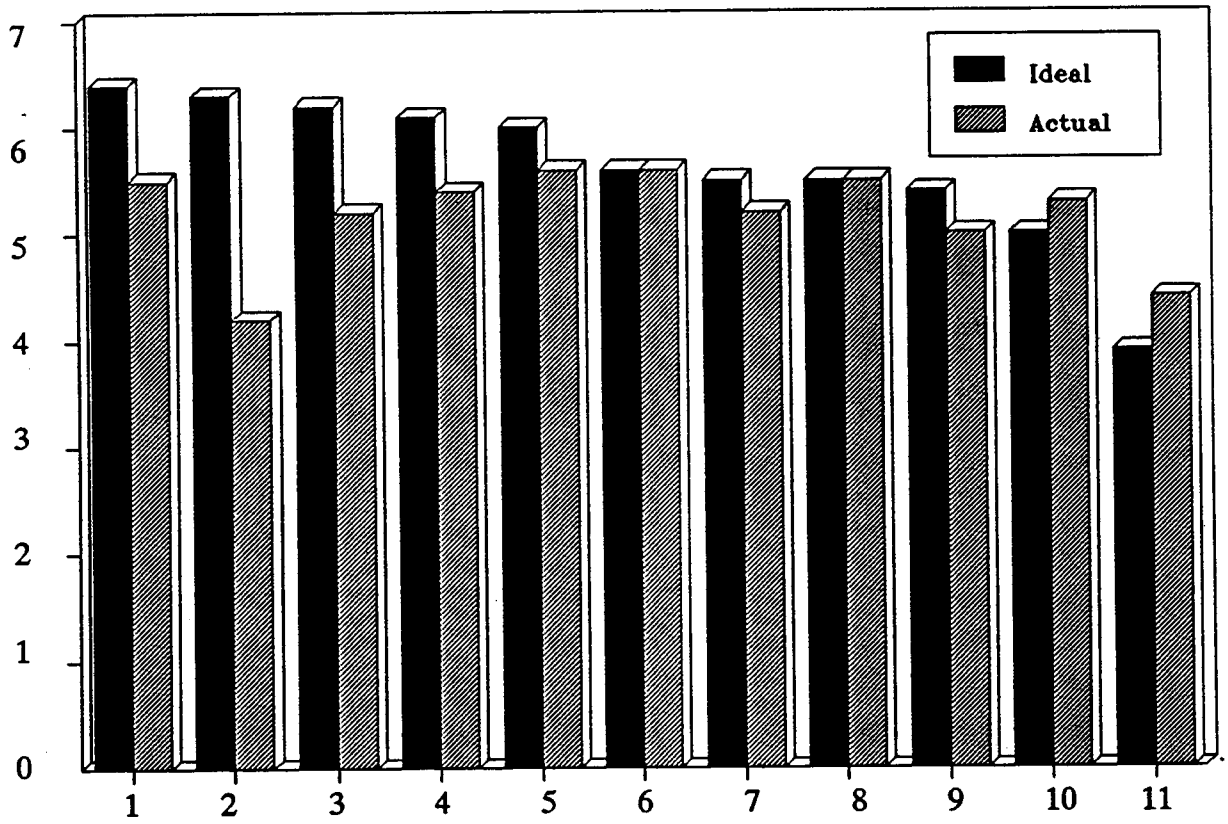
	Average Score		
Travel Attributes	Pleasure	Business	Difference
Visit Interesting Places	6.4	3.3	+3.1
Avoid Traffic Congestion	6.3	6.2	+0.1
Clean, Well–Maintained Roads	6.2	6.2	---
Seeing Dramatic Scenic Vistas	6.1	3.3	+2.8
Good Travel Signing	6.0	3.8	+2.2
Accessible Recreation Areas	5.6	2.8	+2.8
Enjoy a Leisurely Pace	5.5	3.2	+2.3
Convenient Roadside Services	5.5	5.4	+0.1
Countryside Travel	5.4	3.3	+2.1
Small Town Atmosphere	5.0	3.4	+1.6
Quick Arrival at Destination	3.9	6.2	–2.3

As described above, pleasure travel expectations are compared with experiences on US–101 to provide a relative rating for US–101. These comparisons are presented in Table 4–7 and Figure 4–3 for US–101 urban areas, and Table 4–8 and Figure 4–4 for US–101 rural areas. Average pleasure trip expectation attribute scores are ordered according to priority of importance to travelers.

Figure 4–3 shows attribute ratings for US–101 urban areas. Important attributes for which US–101 urban areas must do better in order to meet or exceed traveler expectations for pleasure trips include visiting interesting places, avoiding traffic

congestion, well-maintained roads, dramatic scenic vistas, and good travel signing. Of these qualities the greatest need for improvement is in traffic congestion. It is interesting to note that quick arrival at the destination receives the lowest rating among these trip expectations. It appears that speed in getting between two points is not particularly important, but the style or atmosphere in which one travels between two points is very important. Travelers on scenic corridors want the feeling of the open road, or at least freedom from congestion. Roadway designs, such as the Parkway Concept, should be employed on US-101 to provide travelers with as free and open a travel experience as possible. In addition, the maintenance of urban US-101 should be a priority.

Figure 4-3
TRAVEL ATTRIBUTES RATING FOR US-101 URBAN AREAS



1. Visit Interesting Places
2. Avoid Traffic Congestion
3. Clean Well-Maintained Roads
4. Seeing Dramatic Vistas
5. Good Travel Signing
6. Accessible Recreation Area
7. Enjoy a Leisurely Pace
8. Convenient Roadside Services
9. Countryside Travel
10. Small Town Atmosphere
11. Quick Arrival at Destination

Urban US-101 also can be improved in the areas of dramatic scenic vistas and as an interesting place to visit. The highway in many coastal communities does not directly front the Pacific, and as a consequence travelers' ideal of an ocean view through town is rarely achievable. However, improving the visual appeal of urban areas and providing signage directing visitors to nearby scenic loops or alternates may improve the perception of US-101 urban areas.

The rating of urban US-101 compared to the ideal trip was relatively low with respect to interesting places to visit. This may be due in part to strip development patterns which dilute the uniqueness of coastal cities and towns. Communities on the coast should strive to capture the community's sense of specialness through land use and urban design efforts. Many of the these image issues for urban US-101 are addressed in the Parkway Concept with ideas such as community entrances, planted medians, pedestrian walkways and cafes, and sign standards. (See Parkway Concept, Appendix A). It is noteworthy that certain coastal communities such as Florence and Lincoln City are dealing with these issues in their current planning processes.

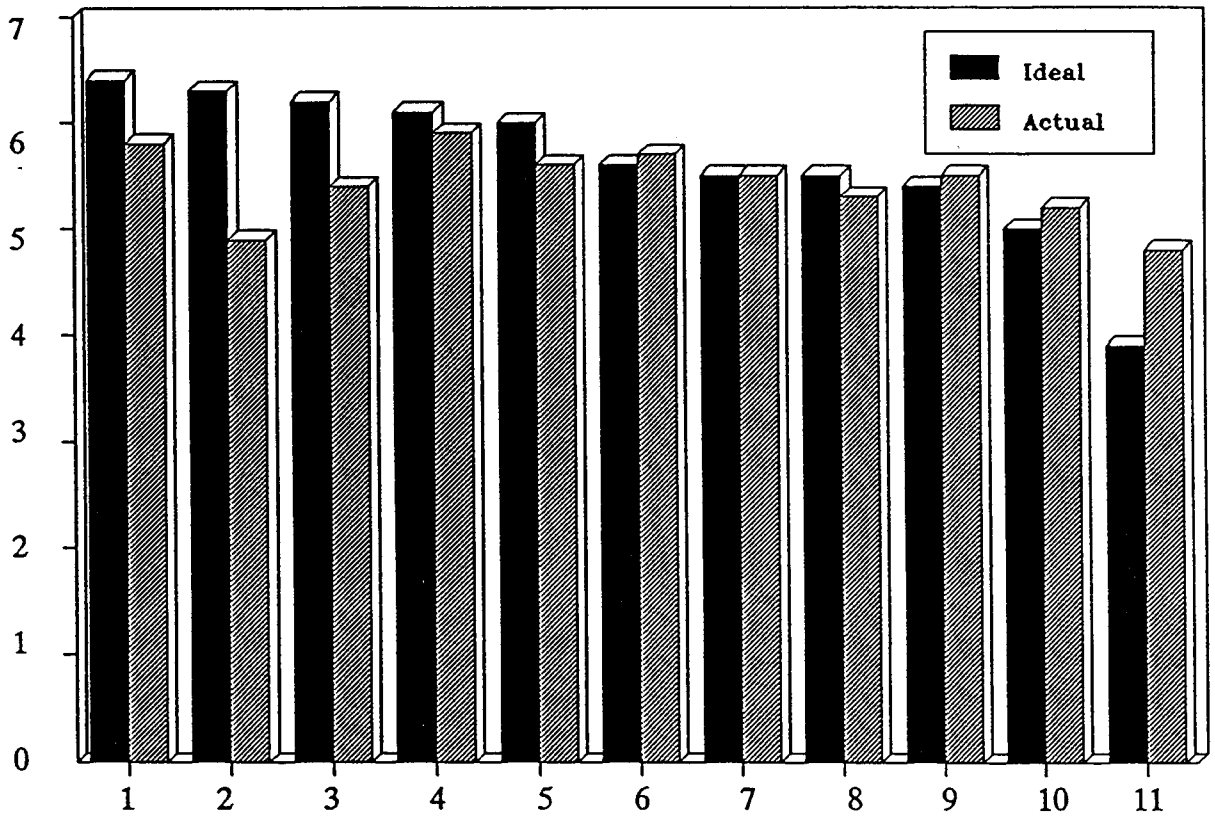
Urban US-101 does meet traveler ideals in the area of accessible recreation. The coastal corridor provides a wide variety of recreational activities. These activities should remain accessible to travelers through continued provision of information at visitors centers and through a quality travel signing system.

Table 4-7
TRAVEL ATTRIBUTES RATING FOR US-101 URBAN AREAS

	Average Score		
Travel Attributes	Ideal Rating	US-101 Urban Rating	Difference
Visit Interesting Places	6.4	5.5	-0.9
Avoid Traffic Congestion	6.3	4.2	-2.1
Clean, Well-Maintained Roads	6.2	5.2	-1.0
Seeing Dramatic Scenic Vistas	6.1	5.4	-0.7
Good Travel Signing	6.0	5.6	-0.4
Accessible Recreation Areas	5.6	5.6	---
Enjoy a Leisurely Pace	5.5	5.2	-0.3
Convenient Roadside Services	5.5	5.5	---
Travel Through Rural Areas	5.4	5.0	-0.4
Small Town Atmosphere	5.0	5.3	+0.3
Quick Arrival at Destination	3.9	4.4	+0.5

It should be noted that an analysis comparing the ratings of residents and nonresidents was conducted. While differences were not dramatic enough to display graphically, nonresidents had somewhat higher trip expectations than residents, but gave the coastal corridor correspondingly higher ratings. Residents, perhaps due their familiarity with the highway, scored the coastal corridor somewhat lower than their out-of-state counterparts.

Figure 4-4
TRAVEL ATTRIBUTES RATING FOR US-101 RURAL AREAS



1. Visit Interesting Places
2. Avoid Traffic Congestion
3. Clean Well-Maintained Roads
4. Seeing Dramatic Vistas
5. Good Travel Signing
6. Accessible Recreation Area
7. Enjoy a Leisurely Pace
8. Convenient Roadside Services
9. Countryside Travel
10. Small Town Atmosphere
11. Quick Arrival at Destination

Figure 4–4 and Table 4–8 show attribute ratings for rural areas of US–101. While the overall pattern of ratings is similar to urban US–101, expectations are being met more successfully in the rural areas of the corridor. Traffic congestion, well–maintained roads, visiting interesting places, dramatic scenic vistas, and good travel signing are highly rated attributes for which rural US–101 does not meet the ideal rating. As with urban areas rural traffic congestion continues to be a problem, with the greatest need for improvement in this attribute.

The perception of congestion as a problem is supported by travelers' desire for highway design features such as more passing lanes, as discussed below. As with urban ratings, quick arrival is not an important attribute for travelers in rural ares. Most important is a free flowing pattern of traffic which allows the traveler to relax and enjoy the journey. More passing lanes and highway designs in the Parkway Concept should address this need. In addition, road maintenance is a concern on rural roadways, as in urban areas. Based on written comments summarized below, maintenance issues include line painting, potholes and road surfacing, and vegetation control to improve visibility at some intersections.

Table 4–8
TRAVEL ATTRIBUTES RATING FOR US–101 RURAL AREAS

	Average Score		
Travel Attributes	Ideal Rating	US–101 Rural Rating	Difference
Visit Interesting Places	6.4	5.8	–0.6
Avoid Traffic Congestion	6.3	4.9	–1.4
Clean, Well–Maintained Roads	6.2	5.4	–0.8
Seeing Dramatic Scenic Vistas	6.1	5.9	–0.2
Good Travel Signing	6.0	5.6	–0.4
Accessible Recreation Areas	5.6	5.7	+0.1
Enjoy a Leisurely Pace	5.5	5.5	---
Convenient Roadside Services	5.5	5.3	–0.2
Travel Through Rural Areas	5.4	5.5	+0.1
Small Town Atmosphere	5.0	5.2	+0.2
Quick Arrival at Destination	3.9	4.8	+0.9

Visiting interesting places is an attribute which falls below expectations, although rural areas score higher than urban areas. Combined with the low score with respect to travel signing, it appears that an improvement in the travel signing system may make it

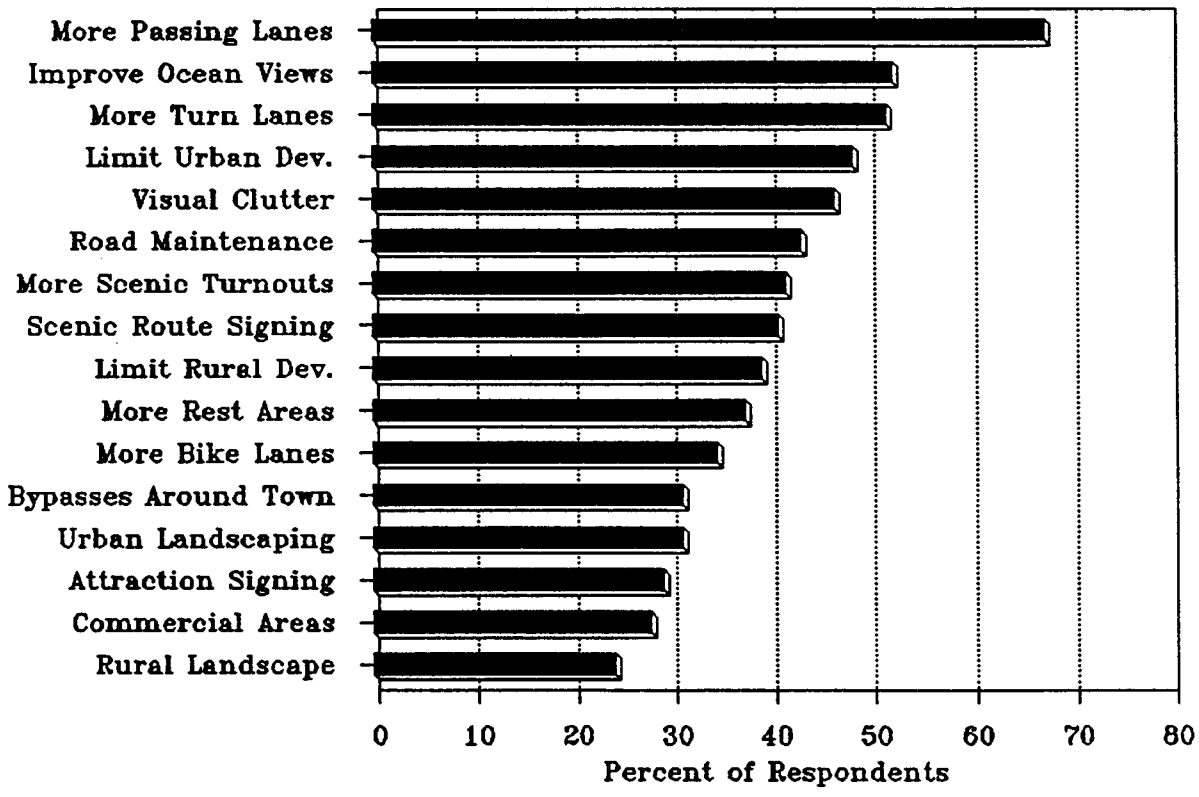
easier for travelers to find the interesting places they had expected to encounter on the coast. The rural Oregon coast does have interesting historic, cultural, and natural areas available for exploration, but travelers seem to be missing these places as they travel on the highway. This finding may also indicate that improvements in the appearance of coastal communities would increase the interest of travelers.

Though dramatic scenic vistas also fall below ideals in rural areas, they do so only by a small differential of -0.2 in the rating averages. Of all attributes on both urban and rural highway segments, dramatic scenic vistas in rural areas are the most desirable feature for travelers, with scores averaging 5.9. See Table 4-8.

Important US-101 Improvements

Figure 4-5 and Table 4-9 shows suggested improvements to US-101. Improvements rated "very important" are listed by priority in the figure, while the table lists all response categories.

Figure 4-5
"VERY IMPORTANT" US-101 IMPROVEMENTS



The majority of respondents (67.4%) indicated more passing lanes as a very important improvement. In addition, 25.2% of respondents said this improvement was somewhat important while only 7.4% rated passing lanes as unimportant. This finding is supported by the discussion of travel attribute ratings, were avoiding traffic congestion was rated the attribute for which US-101 was least able to meet expectations. Other highway improvements related to traffic flow are turn lanes, which 51.6% indicated is a very important improvement, and better road maintenance, which is considered very important by 43.1%.

Table 4-9
ADDITIONAL US-101 IMPROVEMENTS

	Percent of Respondents		
Improvements to US-101	Very Important	Somewhat Important	Not Important
Improve Attractiveness of Commercial Areas	27.9%	42.4%	29.6%
More Scenic Turnouts	41.6%	48.6%	9.8%
More/Better Rest Areas	37.5%	47.9%	14.6%
Bypasses Around Towns	31.1%	40.1%	28.8%
Better Road Maintenance	43.1%	43.4%	13.5%
More Bike Lanes	34.6%	28.9%	36.5%
Improve Ocean Views From Highway	52.3%	36.3%	11.4%
More Passing Lanes	67.4%	25.2%	7.4%
Reduce Visibility of Utilities, Billboards, Clutter	46.5%	33.5%	20.0%
More Turn Lanes	51.6%	37.8%	10.5%
Limit Rural Roadside Development	39.2%	41.7%	19.2%
Signing to Historic Attractions, Recreation Areas	32.9%	54.6%	12.6%
Signing to Scenic Routes	40.8%	47.2%	12.0%
Highway Landscaping in Towns	31.1%	48.1%	20.8%
Highway Landscaping Outside Towns	24.3%	48.2%	27.5%
Limit Development to Existing Urban Areas	48.3%	34.5%	17.2%

If travelers want to leave the congestion and stress of urban routine behind them when they drive on scenic corridors, then a "change of scenery" in the truest sense is another requirement for a pleasurable trip. The travel attributes discussed above which had particularly high ratings -- interesting places and scenic vistas -- appear in terms of US-101 improvements shown in Figure 4-5 and Table 4-9. Improving ocean views (52.3%), limiting commercial development to existing urban areas (48.3%), and reducing

visual clutter (46.5%) were indicated by a significant percentage of respondents as very important improvements. Techniques in response to these suggested improvements may include vegetation management, underground utilities and ad sign control, and land use and access restrictions. These findings indicate that travelers want to leave their urban lifestyle behind when traveling for pleasure, and to visit natural, uncluttered visual environments and view open, stimulating scenic vistas. These are particular qualities which draw travelers to the Oregon coast.

Table 4-10 shows very important highway improvements by age category. Most suggestions for improvements show little distinction according to age, except for two noteworthy cases. Younger travelers are substantially more interested in adding bicycle lanes compared to older travelers. Since younger generations are more physically active than their predecessors these people may continue to want increased bike facilities as they age. Figures for bike sales in Chapter two indicate that bike facility demand will continue to rise. Younger travelers are also interested in aesthetic improvements, such as limiting development and reducing visual clutter, to a greater degree than those in the older group.

Table 4-10
"VERY IMPORTANT" US-101 IMPROVEMENTS BY AGE

	Percent of Respondents		
Improvements to US-101	Under 35	35 to 54	55 or Over
Improve Attractiveness of Commercial Areas	26.0%	34.6%	21.3%
More Scenic Turnouts	37.7%	45.4%	41.6%
More/Better Rest Areas	36.1%	39.3%	37.8%
Bypasses Around Towns	31.7%	32.3%	29.2%
Better Road Maintenance	45.1%	45.2%	40.7%
More Bike Lanes	47.9%	31.1%	23.2%
Improve Ocean Views From Highway	53.0%	48.8%	55.6%
More Passing Lanes	66.9%	63.5%	72.2%
Reduce Visibility of Utilities, Billboards, Clutter	46.3%	51.7%	39.2%
More Turn Lanes	47.2%	56.2%	49.3%
Limit Rural Roadside Development	37.0%	46.1%	31.7%
Signing to Historic Attractions, Recreation Areas	32.6%	33.9%	32.2%
Signing to Scenic Routes	42.3%	36.7%	43.2%
Highway Landscaping in Towns	34.9%	30.8%	26.6%
Highway Landscaping Outside Towns	28.6%	20.6%	23.5%
Limit Development to Existing Urban Areas	47.2%	57.2%	39.0%

These changing attitudes toward the visual environment indicate that aesthetic considerations must be a component of US-101 improvement strategy. Finally, older travelers are more likely to consider passing lanes a very important improvement. Presumably these travelers wish to enjoy a relaxing travel pace and allow impatient younger drivers to pass them by.

Table 4-11 shows very important highway improvements by resident versus nonresident respondents. A somewhat greater percentage of Oregon residents consider traffic-related features -- such as passing lanes, turn lanes, and road maintenance -- to be very important improvements. Nonresidents are somewhat more interested in visual features such as improving ocean views, more scenic turnouts, scenic route signing and development control.

Table 4-11
"VERY IMPORTANT" US-101 IMPROVEMENTS
BY RESIDENT/NONRESIDENT

	Percent of Respondents	
Improvements to US-101	Resident	Nonresident
Improve Attractiveness of Commercial Areas	33.0%	22.2%
More Scenic Turnouts	39.5%	43.4%
More/Better Rest Areas	38.9%	35.8%
Bypasses Around Towns	30.2%	32.2%
Better Road Maintenance	51.5%	33.3%
More Bike Lanes	34.6%	34.1%
Improve Ocean Views From Highway	49.9%	54.6%
More Passing Lanes	71.1%	62.9%
Reduce Visibility of Utilities, Billboards, Clutter	47.2%	45.4%
More Turn Lanes	56.6%	46.5%
Limit Rural Roadside Development	38.2%	39.8%
Signing to Historic Attractions, Recreation Areas	34.1%	31.8%
Signing to Scenic Routes	38.0%	43.7%
Highway Landscaping in Towns	30.1%	31.9%
Highway Landscaping Outside Towns	22.6%	25.9%
Limit Development to Existing Urban Areas	47.0%	49.6%

Table 4-12
"VERY IMPORTANT" US-101 IMPROVEMENTS
BY NUMBER PREVIOUS DAY TRIPS

Improvements to US-101	Percent of Respondents		
	0 to 1 Trips	2 to 5 Trips	6 or More Trips
Improve Attractiveness of Commercial Areas	22.1%	28.1%	32.0%
More Scenic Turnouts	36.3%	41.4%	44.5%
More/Better Rest Areas	34.1%	31.0%	42.5%
Bypasses Around Towns	26.6%	25.9%	36.0%
Better Road Maintenance	26.0%	43.1%	44.9%
More Bike Lanes	26.7%	36.0%	37.4%
Improve Ocean Views From Highway	52.7%	53.0%	51.9%
More Passing Lanes	58.4%	68.2%	73.8%
Reduce Visibility of Utilities, Billboards, Clutter	45.6%	43.9%	47.6%
More Turn Lanes	46.4%	55.2%	53.1%
Limit Rural Roadside Development	31.8%	43.2%	38.2%
Signing to Historic Attractions, Recreation Areas	28.4%	33.1%	32.8%
Signing to Scenic Routes	43.5%	42.7%	37.5%
Highway Landscaping in Towns	31.5%	29.1%	35.2%
Highway Landscaping Outside Towns	24.5%	23.9%	25.0%
Limit Development to Existing Urban Areas	45.0%	50.9%	48.2%

Except for signing to scenic highways and improving ocean views, the more experience a day traveler has on the Oregon coast the greater the likelihood a traveler will consider improvements to be very important. Table 4-12 shows highway improvements by previous day trips to the coast. For overnight visitors this same pattern generally holds true, though a greater percentage of novice overnight visitors (60.1%) rate improving ocean views as a very important improvement. See Table 4-13. A substantial portion of travel to Oregon is done by repeat visitors, indicating that listed improvements should be considered in light of this crucial group of travelers.

Table 4-13
"VERY IMPORTANT" US-101 IMPROVEMENTS
BY PREVIOUS OVERNIGHT TRIPS

Improvements to US-101	Percent of Respondents 0 to 1 Trips	2 to 5 Trips	6 or More Trips
Improve Attractiveness of Commercial Areas	24.7%	32.2%	27.4%
More Scenic Turnouts	39.2%	41.9%	42.7%
More/Better Rest Areas	35.0%	34.9%	42.0%
Bypasses Around Towns	22.8%	29.9%	42.0%
Better Road Maintenance	25.8%	47.5%	43.1%
More Bike Lanes	31.6%	34.1%	31.0%
Improve Ocean Views From Highway	60.1%	55.9%	43.2%
More Passing Lanes	54.7%	71.7%	71.7%
Reduce Visibility of Utilities, Billboards, Clutter	48.1%	47.1%	50.0%
More Turn Lanes	39.1%	56.6%	59.6%
Limit Rural Roadside Development	31.7%	46.6%	40.4%
Signing to Historic Attractions, Recreation Areas	29.0%	33.6%	36.9%
Signing to Scenic Routes	41.6%	39.1%	42.8%
Highway Landscaping in Towns	32.3%	37.7%	26.3%
Highway Landscaping Outside Towns	25.7%	29.6%	20.2%
Limit Development to Existing Urban Areas	47.0%	55.6%	46.6%

Suggested US-101 Improvements

The following tables show a listing of written comments concerning the single most important thing Oregon can do to improve US-101 for travelers. These comments reflect the need to relieve traffic congestion. In urban areas, suggestions focus on roadway maintenance and traffic flow features such as passing lanes and bypasses. Of these respondents, 11.0% said the US-101 area was fine as it was. See Table 4-14. The primary suggestion for rural areas is to add passing lanes, with nearly a quarter (23.5%) making this suggestion. The next most common response was fine as is. See Table 4-15. Approximately 300 respondents took time to add written comments for each category.

Table 4-14
SUGGESTIONS TO IMPROVE US-101 URBAN AREAS

Suggested Improvement	Percent of Responses
Improve Road Maintenance	13.5%
Bypasses Around Coastal Towns	11.9%
More Passing Lanes	11.6%
Fine As Is	11.0%
Less Congestion	10.2%
Four Lanes	7.8%
Improve Directional Signs	5.3%
Widen Roads	4.8%
Control Development	4.3%
More Turn Lanes	4.2%
Improve Hist/Rec Attraction Signs	3.0%
More Public Rest Areas	2.0%
More/Better Bike Lanes	1.8%
Earlier Signs	1.7%
Outside Ad Control	1.4%
Speed Control	1.3%
More/Better Scenic Turnouts	1.1%
More Visitor Info	.9%
Truck Bypasses	.8%
Improve Town Appearance	.5%
Underground Utilities	.4%
Improve Recreation Access	.3%
Better Pedestrian Crossings	.3%

Table 4-15
SUGGESTIONS TO IMPROVE US-101 RURAL AREAS

Suggested Improvement	Percent of Responses
More Passing Lanes	23.5%
Fine As Is	15.4%
Improve Road Maintenance	12.6%
More/Better Scenic Turnouts	8.9%
Widen Roads	5.0%
Improve Hist/Rec Attraction Signs	4.5%
Control Development	3.1%
Preserve Natural Scenery, No Clear Cuts	3.1%
Four Lanes	2.9%
Improve Directional Signs	2.8%
More/Better Bike Lanes	2.4%
Straighten Curves	2.1%
Improve Ocean Views	1.9%
More Public Rest Areas	1.8%
Bypasses Around Coastal Towns	1.4%
More Left and Right Turn Lanes	1.0%
Control Ad Signs	.9%
Improve Town Appearance	.6%
Speed Control	.6%
Underground Utilities	.5%
More Guard Rails	.5%
More Travel Services	.5%
Improve Recreation Access	.3%

Highway Wayside Use Patterns

In order to understand in more detail how highway travelers use specific highway features a brief analysis was completed to scenic wayside use by Oregon Coast travelers. These data are intended to provide usable data for travel and highway use studies which involve turnout design.

For this analysis two coastal locations were selected, one on the Central Coast and one on the North Coast; these are the two regions of the coast with the largest traffic volumes. The Haceta Wayside, located near Haceta Head on the Central Coast, provides an excellent coastal view, but is situated on a curve and is not easily accessible if traffic is heavy. Neahkahnie Wayside on the North Coast is larger, more easily accessible, and also provides a very good ocean view. Neither wayside provides beach access and therefor does not tend to be used for long-term parking.

Traffic was counted for each location for one day during the week in June, 1990, both for US-101 overall and for vehicles who pull into the wayside. In addition, individual vehicles were logged in and out of the wayside, allowing a computation of average length of stay.

The findings in Table 4-16 show that about 9% of traffic used the Haceta Wayside, and over 16% used the Neahkahnie facility. This is a substantial portion and indicates the extent to which good quality waysides are used in scenic portions of the coast. These figures are not necessarily characteristic of other waysides or pullouts, which would have different views, access from the highway, etc.; findings on weekend days also could be different.

Average length of stay in both locations was very brief, four minutes or less. The maximum lengths of stay were under 20 minutes. This indicates that these facilities, if viewed as attractions, can turn over travelers very rapidly, and that therefore a relatively small, simple but uncongested facility can provide a scenic experience for a large number of travelers.

Table 4-16
HIGHWAY WAYSIDE USE CHARACTERISTICS
OREGON COAST, 1990

Location	Total Traffic	Turnout Traffic	Percent Turnout	Average Turnout Stay (min)
Haceta Wayside	1,348	122	9.1%	4.0
Neahkahnie Wayside	1,312	219	16.6%	3.7

5. ECONOMIC IMPACTS OF SCENIC HIGHWAY IMPROVEMENTS

Highway characteristics are a vital component of a destination area's attractiveness to visitors. Highway capacities determine the level of service available for access to the area, and for travel among locations within the area. The attractiveness of the highway corridor also influences the willingness of visitors to travel to a destination area, and the extent to which highways within the area contribute to the area's attractiveness as a destination. The contribution of scenic highways to attractiveness is symbolic to a certain degree: representing in a specific, visible sense a commitment to maintaining the quality of the area. Certain scenic highway elements, such as turnouts, also provide specific activity opportunities for visitors. Given the typical course of commercial development in those heavily traveled scenic corridors where no such commitment to quality exists, visitors are quick to recognize, and appreciate, those locations which strive to maintain attraction and resource quality.

The economic impacts of highway improvements -- including scenic highway development -- thus stem from a) the extent to which scenic highway corridors facilitate travel to a destination area, and b) the extent to which such scenic highways serve to increase a destination area's attractiveness by serving as one component of the attraction. In the case of the Oregon coast, where most visitor access is either from out-of-state or from major population centers to the east of the Coast Range, scenic highway segments on US-101 would serve as attractions of the second kind: improving the extent to which the coast functions as an attraction by making coastal travel easier and more enjoyable for road users.

The economic benefit analysis, therefore, is based on three premises:

- scenic highway projects on the Oregon Coast will increase the attractiveness of the area to travelers by serving as significant components of what the area has to offer to visitors
- relatively few travelers who are visiting the coast have traveled there specifically to drive scenic highway routes
- visitor volume will increase to some extent even if no highway improvements are made; such increases will lead to additional congestion and some deterioration in the overall attractiveness of the coast as a destination unless accompanied by transportation facility improvements

Travel to the Oregon Coast is based substantially on the quality and uniqueness of the area in the eyes of its visitors. According to the visitor study completed in 1989, the coast is the most important attraction in the state to Oregon's visitors, and the quality of Oregon's natural environment is the most important feature of the state. Accordingly it is

very important for Oregon to maintain, or improve, the quality of the coastal area in order to maintain or expand visitation. Any substantial degradation in quality could result in deterioration of the coast's ability to attract visitors. Moreover, decreasing quality can lead to changes in the visitor mix, away from quality-oriented visitors who tend to make larger-than-average travel expenditures, towards visitors who care less about quality and who tend to spend less.

Growth Trends on the Oregon Coast

Currently the Oregon Coast is experiencing substantial increases in travel volumes. Such growth can lead to declines in attractiveness -- increased congestion, increased travel times, additional commercial development in scenic locations, etc -- unless specific measures are taken to maintain quality. Scenic highway development is one approach to specifically maintain or increase highway levels of service, reduce congestion, while maintaining or increasing attractiveness. Both factors are crucial if the coast is to maintain it overall attractiveness as a destination.

Although only limited data are available to illustrate travel-related growth trends over the past ten years on the Oregon Coast, certain information is useful. Table 5-1 shows the average daily traffic for 1979 and 1988 for the six permanent traffic recorders maintained by ODOT on US-101 in Oregon. Growth between 1979 and 1988 ranges from 11.7% near Reedsport on the Central Coast to 44.6% at the California border, with other North Coast locations in the mid-20 percent range. For purposes of comparison the

Table 5-1
OREGON COAST AVERAGE DAILY TRAFFIC, 1979-1988

Recorder Location	County	Average Daily Traffic 1979	1988	Percent Change	Population Change 1980-1989
Gearhart	Clatsop	7,492	9,545	27.4%	4.6%
Rockaway Beach	Tillamook	4,528	5,301	17.1%	1.2%
Otter Rock	Lincoln	5,964	7,620	27.8%	9.8%
Reedsport	Douglas	6,648	7,428	11.7%	1.3%
Bandon	Coos	4,771	5,661	18.7%	-7.9%
Brookings	Curry	5,155	7,398	43.5%	7.6%

Source: Oregon Department of Transportation, 1990.

population growth between 1980 and 1988 for each county is shown in the last column, excepting Lane and Douglas Counties, which have only small coastal portions. Since traffic includes both resident and visitor traffic, and since the coast economy during this period has experienced little or no population growth or economic growth except that related to travel and recreation, much of this traffic growth would be attributable to the visitor industry.

Data on average annual employment in hotels and motels on the Oregon Coast, which provide a good measure of change in the visitor industry, show growth from 2,046 to 2,764 employees over the ten years between 1979 and 1988, an increase of 35.1% (Oregon Employment Division, 1981 and 1990). These figures include both full and part-time employees and exclude Lane and Douglas Counties. Since 1979 was a year of decline in the visitor industry in Oregon, this particular comparison may overstate somewhat the typical growth rate on the coast during this decade.

These two measures indicate substantial growth in activity on the Coast, and suggest that much of the increase has been due to visitor volume increases rather than to increases in coast resident-related travel.

Scenic Highways As One Means To Enhance Market Penetration

Economic impact analysis makes use of the concept of **market penetration**, which is a well-accepted way by which the acceptance of and demand for a product can be measured within a specified market area. Market penetration simply analyzes demand on a per-household or per-person basis, and in so doing explicitly accounts for the influence of market area population growth.

The concept of market penetration -- or "market capture" -- represents the extent to which the Oregon Coast is able to attract visitation **per household** among the households which comprise its market areas. Stable penetration within a market represents a constant level of propensity of travel to the Oregon Coast for each market area household. Stable penetration leads to growth (or decline) in visitation from the market area only as a function of population changes. Since Oregon's primary markets are in the western portion of the U.S. where population growth is occurring, stable penetration of these markets would lead to increasing visitor volume in Oregon.

An increase in market penetration for a particular market area represents an increased propensity to travel to the Oregon Coast, on the average, for households within that market area. This would occur if a) there were an overall increase in travel per household within the market area, and the Oregon Coast receives the same share of the increase as the share of all travel it currently receives for each household, or b) the Oregon Coast receives a greater share of existing travel of the average household within a market area, or c) some combination of changing travel volume by households in the

market area and changes in the Oregon Coast share of travel by the average household.

If growth in travel volume to the Oregon Coast is a goal, it is desirable to increase market penetration to the greatest extent possible. Increased penetration corresponds to the coast becoming a relatively more desirable destination compared to competing travel destinations, and enhances the ability of the coast to maintain visitor volume even if economic conditions or other factors decrease the overall propensity of households to travel.

Travel Impacts and Market Penetration on the Oregon Coast

The market penetration measure used for this analysis is **visitor expenditures per market area resident.** This measure directly represents the economic benefit, per market area resident, of travel to the Oregon Coast. An alternative measure would be visitor volume per market area resident or household. While more desirable in some respects, this measure requires visitor volume data which are not available for the coast. The market penetration measure is always calculated in terms of constant 1988 dollars.

The analysis which follows is broken out in some cases by coastal region, using the Oregon Tourism Division regional boundaries. The North Coast consists of Clatsop and Tillamook Counties. The Central Coast consists of Lincoln County plus the coastal portions of Lane and Douglas Counties. The South Coast consists of Coos and Curry Counties.

Oregon Coast travel-related direct economic impacts in 1988 amounted to $446 million in travel expenditures, with $78 million in payroll and a total of 8,755 jobs. These figures, which are from the most recent study of travel and tourism impacts for Oregon counties, appear in Table 5-2. The largest portion of this activity occurred in the Central Coast, followed by the North Coast and the South Coast, respectively. These figures include all travel to the coast which is overnight, or day travel from a destination more than 50 miles away. Both visitors to the state and Oregon residents are included.

The analysis appearing below makes use of the visitor expenditure figure from the Dean Runyan Associates study; additional analysis of scenic highway-related impacts will make use of the relationships between visitor expenditures and other impacts, as they appear in Table 5-2.

Table 5-2
TRAVEL-RELATED DIRECT ECONOMIC IMPACTS, 1988
BY OREGON COASTAL REGION

Impact Category	North Coast	Central Coast	South Coast	Coast Total
Travel Expenditures ($000)	158,619	210,261	77,591	446,471
Payroll ($000)	28,500	36,876	12,730	78,106
Employment	3,244	3,918	1,593	8,755
Local Govern. Revenue ($000)	1,467	1,852	566	3,885
State Govern. Revenue ($000)	5,595	7,339	2,833	15,767

Source: Dean Runyan Associates, 1989

For purposes of comparison, travel expenditures for the coastal regions of California for 1988 amount to $992 million for the North Coast, $1,916 million for the Central Coast, and $7,325 for the San Francisco Bay Area (Dean Runyan Associates, 1989). These figures were prepared for the California Department of Commerce using methodology comparable to that used to measure Oregon travel impacts. The magnitude of the expenditures (comparing to the $446 million for the Oregon Coast) indicates that travel and tourism makes a very substantial economic contribution to California coastal areas.

Current Market Penetration Levels

Market penetration figures for the Oregon Coast, calculated in terms of visitor expenditures per market area resident, appear in Table 5-3. The market area definitions, their population, and the proportion of Oregon Coast visitors which derive from each market area, appear in Table 5-4. The data on visitor origin derive from Travel and Tourism in Oregon, 1988, which reports the breakout of out-of-state visitors by origin. For this analysis it is assumed that half of coast visitors are from Oregon. Although no specific data are available on this proportion, this figure is a good estimate given the information which is available. Foreign visitors are assumed to represent a constant 4% of all visitors, their proportion for Oregon in 1988. While this is almost certain an underestimate of the future proportion of foreign visitors, no other reliable forecasts for Oregon are available. Oregon population data are from the most recent ODOT State Population Forecasts; data for the other states are from the *Statistical Abstract of the United States, 1988.*

Table 5-3
OREGON TRAVEL MARKET CHARACTERISTICS

Travel Market	Proportion of Oregon Visitors (%)	Population (Million) 1988	2000
Oregon	50.0	2.74	3.09
California	13.9	28.1	33.5
Washington	5.8	4.6	5.0
Other U.S.	26.3	210.0	226.2
Foreign	4.0	NA	NA
Total	100.0	NA	NA

Market penetration figures, which appear in Table 5-4, clearly illustrate the importance of the Oregon market for Oregon Coast destination areas. Figures in the table show the annual 1988 expenditures in each region of the coast for each person residing in Oregon's market areas. For example, for the North Coast, Oregon residents spent on average $28.95 per person in 1988. California residents, in comparison, spent only an average of $0.78 per person. It is important to keep in mind that these averages pertain to **all residents of each market area**, not just those who happened to visit Oregon in 1988; on a per-visitor basis, data show that California visitors spend more per day than Oregon residents who travel.

Table 5-4
MARKET PENETRATION BY OREGON TRAVEL MARKET, 1988

Travel Market	Market Penetration ($/person/yr) North Coast	Central Coast	South Coast
Oregon	28.95	38.37	14.16
California	0.78	1.04	0.38
Washington	2.00	2.65	0.98
Other U.S.	0.20	0.26	0.10

Note: Market penetration is measured in terms of annual visitor expenditures divided by market area population, expressed in dollars per person per year.

Differing penetration levels, as measured by expenditures per market area resident, are due to differences with respect to frequency of travel to Oregon, average length of stay, and average daily expenditure levels.

While these figures are illuminating in their own right, their primary use here is for estimating net benefits associated which changes in market penetration.

Additional Market Penetration Scenarios

For purposes of estimating economic impacts associated with scenic highway development an approach is used which focuses on a) the overall development program for the coast, of which scenic highway development is a portion, and b) the extent to which this development program allows the coast to maintain or expand its position in the market as a travel destination. Development which would occur on the coast within the next decade, and which accordingly would be associated with scenic highways, includes commercial services (accommodations, food service, etc.), campgrounds, parks, visitor attractions (such as the Oregon Coast Aquarium) and a variety of recreation activities.

No attempt is made to determine the specific economic benefit which is directly attributable to scenic highway development. Although such an analysis would be desirable, no data are available, nor collected as part of this project, on which such an estimate could be based. Instead this project analyses the economic benefits associated with the scenic highway and other development which will be necessary to at least maintain, and perhaps expand, the coast's ability to draw visitors from its travel markets. It is clear from the review of existing conditions on the coast that additional development, and the associated growth in travel volumes, cannot occur without further deterioration in highway service levels and in the quality of the visitor experience to the extent it is influenced by road congestion. Scenic highway projects are a vital approach to maintaining traffic flow while preserving, to the extent possible, scenic qualities of important road segments. Such projects are a necessary component of coastal development if destination area quality is to be maintained. If quality declines, the ability to maintain existing penetration of travel markets will decline, and accordingly travel volumes and economic benefits will be depressed with respect to potential levels.

An alternative means of estimating scenic highway economic benefits would rely on measuring travel volume and other characteristics prior to and after scenic highway improvements and controls are put in place, and in so doing attempt to isolate travel changes which are specifically attributable to scenic highway program improvements. Unfortunately the schedule for this project did not allow use of such methodology.

Economic benefits analyzed for this report include travel-related business receipts, payroll, employment, and state and local tax receipts. The analysis includes both direct

benefits and total benefits, where the latter includes secondary and induced effects in the coastal economy.

The analysis makes use of the findings contained in The Economic Impacts of Travel in Oregon, 1988, prepared by Dean Runyan Associates in 1990. The 1988 impact findings are based on the model which the Oregon Tourism Division uses to measure travel-related economic impacts each year. A full discussion of impact analysis methodology and data sources can be found in The Economic Impacts of Travel in Oregon, 1987 (Dean Runyan Associates, 1989).

For purposes of analysis, four impact scenarios are used to make projections to the year 2000; the scenarios are as follows:

I. **Maintain existing market penetration.** Maintain the extent to which market area residents travel to Oregon each year; growth is due primarily to growth in market area populations. This scenario is used as a comparison baseline.

II. **Limited market penetration expansion.** Expand market penetration of the Oregon markets by 5%, expand penetration of California and Washington by 10%, and other portions of the U.S. by 7.5%.

III. **Moderate market penetration expansion.** Expand Oregon market penetration by 10%, penetration of California and Washington by 20%, and other portions of the U.S. by 10%.

IV. **Aggressively expand all market penetration.** Expand both Oregon penetration by 10%, and other U.S. market penetration by 20%, and California and Washington penetration by 30%.

These four scenarios represent different levels of overall development on the Oregon Coast, of which scenic highway development in a component. In each case the specific quantity or components of development are not specified; it is assumed that a planning study for the coast would study scenic highway development opportunities, as well as a variety of other program options, analyze specific costs and benefits of these program components, and provide specific recommendations for project funding.

Scenario I assumes that additional scenic highway and other development would allow the coast to maintain the penetration it now has in all markets. Visitor volume and expenditures would increase, but only because of increases in market area populations. This scenario is used as the baseline against which impacts are compared.

Scenario II assumes that scenic highway and other development would increase penetration to a limited degree, more in out-of-state markets than locally. Additional penetration would be achieved due to increased visibility of the state, an increased propensity to revisit the state, higher average expenditures and/or longer lengths of stay. This scenario assumes that Oregon residents, who already visit the coast with relatively

greater frequency and are very familiar with the area, would not increase their travel to the coast, on a per-person basis, to as great an extent as residents of out-of-state markets.

Scenario III assumes that scenic highway and other development would increase Oregon penetration by a more substantial amount, with emphasis on expanding penetration outside Oregon. Increased penetration would be due to additional trips each year, longer trips, and/or higher average expenditure levels.

Scenario IV represents substantial additional penetration of Oregon's travel markets, particularly those in California and Washington. This increased propensity of travel to Oregon, and the Oregon Coast, would relate to further increases in American disposable income, an increase in the proportion of households consisting of retired individuals, and other factors pertaining to market area characteristics, plus other factors pertaining to Oregon and the coast as destination areas, such as continued transportation, travel service, recreation, and other development.

The latter three market penetration scenarios thus specify increased penetration by amounts varying from 5-10% to 20-30%. Population growth during this period is expected to be about 8% for national markets other than the west coast, with more rapid growth (over 20%) projected for California; such population growth would increase Oregon visitor volume over and above growth in visitor volume based on increased market penetration. Hence the four scenarios represent visitor expenditure growth (measured in constant dollars) from approximately 9% to nearly 30% during the ten-year period. Recalling the Oregon Coast growth patterns discussed in a section above, the four scenarios appear to represent the range of likely growth patterns for the next decade.

In view of past growth trends in Oregon travel and tourism, recent population growth in the state, and Oregon's position in the west coast travel market, it appears that Scenario III represents the best, if somewhat conservative, forecast of travel impacts for the year 2000. If market conditions deteriorate during the next decade -- due to national recession, increased fuel prices, or other factors -- then Scenario II, would be the best representation. Scenario IV would occur with continued strong population growth on the West Coast, sustained economic expansion, and no substantial travel constraints associated with increased fuel costs, transportation facility limitations, etc.

Direct Impacts Associated With Scenic Highway Development

The economic benefits -- in terms of direct visitor expenditures -- which are associated with each scenario appear in Table 5-5. Reviewing the totals, the findings show that Scenario I results in a total of $499 million in visitor expenditures, Scenario II in $533 million, Scenario III in $560 million, and Scenario IV $581 million. In all cases these expenditures are expressed in 1988 dollars.

Table 5-5
ANNUAL VISITOR EXPENDITURES BY SCENIC HIGHWAY SCENARIO
OREGON COAST, YEAR 2000

	Direct Visitor Expenditures (million $/year)			
Travel Market	North Coast	Central Coast	South Coast	Total Coast
Scenario I: Maintain Existing Penetration				
Oregon	89	119	44	252
California	26	35	13	74
Washington	10	13	5	28
Other U.S.	45	60	22	126
Foreign	7	9	3	19
Total	177	235	87	499
Scenario II: Increase Oregon Penetration by 5%, Washington and California by 10% and Other Out-Of-State by 7.5%				
Oregon	94	124	46	264
California	29	38	14	81
Washington	11	15	5	31
Other U.S.	48	64	24	136
Foreign	7	10	4	21
Total	189	251	93	533
Scenario III: Increase Oregon, Other U.S. Penetration by 10%, California and Washington by 20%,				
Oregon	98	130	48	277
California	32	45	15	89
Washington	12	16	6	34
Other U.S.	49	65	24	139
Foreign	8	10	4	22
Total	199	264	97	560
Scenario IV: Increase Oregon by 10%, Other U.S. Penetration by 20%, California and Washington by 30%				
Oregon	98	130	48	277
California	34	45	17	96
Washington	10	17	6	34
Other U.S.	54	71	26	152
Foreign	8	11	4	22
Total	205	275	101	581

Note: Totals affected by rounding.

A review of the net visitor expenditure contribution of each scenario, consisting of a comparison of direct expenditures for each scenario with two different baselines, appears in Table 5–6. The first comparison is with the expenditure total for 1988; this comparison is provided primarily for purposes of reference, in particular to the coastal growth rates discussed in an earlier section. As is evident, the scenarios appear to cover the historic range of growth on the coast, falling between about 12% and 30%.

The more significant comparison is with the Scenario I projection for 2000, where the latter represents growth which would likely occur in coastal travel and recreation because of population growth in Oregon's travel markets. Thus these net values represent the growth which would be associated with additional scenic highway and other development on the coast and which would be over and above that growth which might be expected to occur anyway.

In neither case does the benefit analysis include the impact of decreased travel time for commercial or other traffic.

Table 5–6
DIRECT IMPACTS BY SCENIC HIGHWAY SCENARIO

	Direct Visitor Expenditures (million $/year, 1988 dollars)			
	Scenario I	Scenario II	Scenario III	Scenario IV
Year 2000	499	533	560	581
Change Compared to 1988 ($446 million)	53 (11.9%)	87 (19.5%)	114 (25.6%)	135 (30.3%)
Change Compared to Scenario I Baseline ($488 million)	0 (0.0%)	33 (6.8%)	61 (12.2%)	82 (16.4%)
Cumulative Value ($Million/10 Yrs)	0	204	366	492

Note: Cumulative value assumes straight line growth for 12 years, with the figure calculated using the Scenario I baseline; no correction is made for present value.

Additional visitor expenditure increases, **compared to Scenario I visitor expenditures**, range from $34 million per year for Scenario II, a 6.8% increase from expenditures which would be expected to occur were no development to take place, to $82 million per year for Scenario IV, a 16.4% increase. In all cases these growth amounts and percentages are stated in constant 1988 dollars.

A simple measure of the cumulative value of these annual net benefits appears at the bottom of the table, consisting of the cumulative impacts over the 12 years between 1988 and 2000, assuming straight line increase in annual impacts over this period. No correction has been made for the effects of inflation. The measures show that the annual impacts accumulate to substantial amounts over this period, reaching $492 million for Scenario IV. For purposes of comparisons with investment costs in scenic route improvements this measure should be discounted in an appropriate manner.

The direct other economic impacts which would be associated with increased visitor expenditures for each scenario, consisting of payroll, employment, and local and state tax receipts, are shown in Table 5-7. This analysis makes use of the relationships between visitor expenditures and other impact figures for each coastal county (or portion of county) as presented in The Economic Impacts of Travel in Oregon, 1988, Appendix A. As above, these figures are based on a comparison with Scenario I impacts.

Table 5-7
ADDITIONAL DIRECT ANNUAL ECONOMIC IMPACTS
BY DEVELOPMENT SCENARIO, OREGON COAST, YEAR 2000
(COMPARISON TO SCENARIO I)

Development Scenario	Expenditures ($ million)	Payroll ($million)	Employment	Tax Receipts ($ million)	
				Local	State
Scenario II	34	5.95	667	0.30	1.20
Scenario III	61	10.67	1,196	0.53	2.15
Scenario IV	82	14.35	1,608	0.71	2.90

For Scenario IV, the net employment increase would be 1,608 employees by the year 2000, representing increased payroll of $14 million. Net tax receipt increases would be $710,000 at the local level and $2.9 million for the state. Scenario III net impacts are approximately two thirds of these amounts.

Total Impacts

Total net impacts consist of the direct net impacts described above plus the secondary and induced impacts generated within the Oregon Coast economy. In order to estimate total impacts the IMPLAN model for Oregon was adjusted to represent the Oregon Coast, total income and employment multipliers calculated for the appropriate industries, and these values used to adjust direct impact figures. For this analysis the counties of Lane and Douglas are excluded, since subcounty analysis is not possible under

the circumstances and the bulk of these countys' economic activity does not relate to the coast. The income and employment multipliers were prepared from data provided by the U.S. Forest Service Pacific Northwest Research Station in Portland, Oregon.

Several details of this analysis should be kept in mind when reviewing the results:

- accommodations includes hotels, motels, resorts, and commercial and public campgrounds
- the retail trade multipliers represent all businesses in this category, including gasoline service stations and food stores
- recreation excludes motion picture firms

The multiplier values and their application for estimating total sales and employment appear in Table 5-8 for Scenario III, and Table 5-9 for Scenario IV. These calculations involve the following steps:

1. Direct travel-related payroll for each category of business on the Oregon Coast was calculated from The Economic Impacts of Travel In Oregon, 1988.
2. The corresponding direct income figures were calculated using the relationship between payroll and income for each business category from IMPLAN data, and a direct travel-related income sum was calculated for the coast.
3. The relationship between travel-related receipts and income was represented as a ratio.
4. This ratio was applied to the direct receipts figures for each scenario which appear in Table 5-7 to calculate direct income figures, which were then distributed by business type using the payroll distribution on the coast for travel-related businesses, and appear in Tables 5-8 and 5-9.
5. Total travel-related income associated with each scenario is then calculated using the direct figure and the associated multiplier value.
6. Direct employment figures for each business type for each scenario are calculated from employment figures in Table 5-7, distributed to business categories using the distribution for travel-related employment on the coast.
7. Total employment associated with each scenario is calculated from the direct figure for each category of business and the associated multiplier.

Note that while the direct impact values show income and employment within each of the types of business in the breakout, the total impact values show **all** income and employment attributable to each business category. This total income and employment is spread throughout the range of businesses and households in the Oregon Coast economy.

Table 5-8
TOTAL ANNUAL DEVELOPMENT IMPACTS, SCENARIO III
OREGON COAST, YEAR 2000
(COMPARISON TO SCENARIO I)

Type of Business	Multiplier Income	Multiplier Employ -ment	Direct Impacts Payroll ($Million)	Direct Impacts Income ($Million)	Direct Impacts Employ -ment	Total Impacts Income ($Million)	Total Impacts Employ -ment
Accommodations	2.25	1.46	2.6	3.5	310	7.9	453
Food Service	1.99	1.42	4.0	5.1	509	9.4	723
Auto Service	1.62	1.37	0.7	1.1	68	1.2	93
Recreation	1.68	1.42	1.3	2.1	124	4.0	176
Retail Sales	1.62	1.37	2.0	2.5	186	3.7	255
Total			10.67	14.3	1,196	27.4	1,699

Table 5-9
TOTAL ANNUAL DEVELOPMENT IMPACTS, SCENARIO IV
OREGON COAST, YEAR 2000
(COMPARISON TO SCENARIO I)

Type of Business	Multiplier Income	Multiplier Employ -ment	Direct Impacts Payroll ($Million)	Direct Impacts Income ($Million)	Direct Impacts Employ -ment	Total Impacts Income ($Million)	Total Impacts Employ -ment
Accommodations	2.25	1.46	3.5	4.7	417	10.6	609
Food Service	1.99	1.42	5.4	6.9	684	13.7	971
Auto Service	1.62	1.37	0.9	1.4	91	2.3	125
Recreation	1.68	1.42	1.8	2.8	166	4.7	236
Retail Sales	1.62	1.37	2.7	3.4	250	5.5	343
Total			14.35	19.2	1,608	36.8	2,282

Total additional income for Scenario III amounts to $27.4 million per year, with employment of 1,699. The comparable figures for Scenario IV are $36.8 million and 2,282 employees, respectively. These values indicate that a very substantial economic benefit can occur within the coastal economy if additional development, including scenic highway improvements, can take place which is sufficient to allow additional market penetration of the magnitude represented by Scenarios III or IV. If such development does not take place, and many coastal areas loose a portion of the quality they now enjoy, these additional market penetrations will not be achieved and the associated economic benefits will be foregone.

6. CONCLUSIONS AND RECOMMENDATIONS

This chapter provides a series of conclusions which are based on the research presented in the previous sections of this report, in particular the results of the literature search in Chapter Three and the survey analysis in Chapter Four. Conclusions based on the economic analysis are also presented. The second section of this chapter presents a series of recommendations which derive from these conclusions. Recommendations focus on approaches to best enhance the US–101 resource for the traveling public and to promote the further development of an integrated scenic corridor.

Conclusions

1. People enjoy and seek out travel on scenic highways, and the demand for these roadways is increasing.

Route choice studies indicate that travelers prefer and will seek low stress travel alternatives such as scenic byways. Furthermore, travelers prefer natural scenic landscapes to those characterized by roadside development. Of those surveyed for this study the greatest proportion use scenic routes about every other trip, indicating a strong interest in driving these roads. Nationwide, a majority of Americans participate in pleasure driving as a form of recreation, while increased visits to current national scenic byways and growing sales in recreation vehicles and bicycles indicate an increasing demand for scenic features.

In Oregon, communities see a demand for and benefits of scenic byways and thus are requesting the designation and signing of roads throughout the state. The number of designated and signed scenic routes in Oregon has grown from one tour route in 1985 to approximately 40 proposed or designated routes in 1990. Of travelers to the coast, Oregon residents constitute approximately 50% of overnight visitors and 85% of day visitors. Population in Oregon's inland cities, a source for coastal visitation, continues to grow. The state's principle travel markets of California and Washington also are growing states with large urban areas. Traffic volume counts on US–101 illustrate the increasing visitation to the coastal region.

2. The US–101 corridor functions as a self–contained destination, with travel on the roadway, and the sights it has to offer of adjacent areas, representing a key component of what coastal travelers do.

The vast majority (74.8%) of surveyed resident and nonresident travelers embarked on their current trip primarily to visit the coast, with an additional 21.7% visiting the coast as one of several destinations. Only 3.5% were passing through the coast region on

their way to another destination. In addition, previous studies indicate that of those who visit Oregon from other states, 62% travel to or through at least one portion of the coast. Time spent during a typical travel day on the coastal corridor is fairly well distributed between time in a town or city, traveling on US–101, and time spent on the beach or other attractions. It is significant to note that nearly one third of a typical visitor day is spent traveling on US–101 or another coastal road.

The impact of the roadway as a travel experience is not surprising given that 89.0% of previously surveyed visitors to the coast list sightseeing as a preferred recreational activity. Furthermore, visitors give the state's scenery their highest rating as a reason for traveling through the region. Travelers surveyed for this study consider dramatic scenic vistas and accessible recreation areas as the highest rated trip attributes for rural and urban US–101 areas, respectively.

3. Travelers have high expectations for pleasure trips, particularly experienced travelers.

When asked to rate attributes of pleasure travel on a scale of 1 to 7, travelers gave five of eleven attributes ratings of 6 or more, while an additional five attributes received ratings of 5 or more. Only one attribute was rated as relatively unimportant. These responses indicate that travelers have very high expectations when taking pleasure trips. Furthermore, the more experienced the traveler the higher the desire for US–101 corridor improvements.

4. US–101 has experienced increasing traffic volumes; travelers perceive traffic congestion as a primary highway improvement issue.

Traffic counts on US–101 show steadily increasing traffic volumes. In addition, surveyed travelers rate avoiding traffic congestion as the travel attribute for which US–101 is least able to meet expectations. Travelers also indicate that the most important improvements to US–101 are congestion–relieving improvements such as passing lanes and bypasses around coastal towns. Since quick arrival at the destination is the least important trip attribute, travelers appear to be more concerned about the "feel" of congestion rather than a simple desire for speedy travel.

5. Visiting scenic, interesting places and experiencing natural, uncluttered visual environments are important to travelers who consider visual resource management to be a key US–101 improvement issue.

Particularly for rural US–101, scenic vistas are a highly rated trip attribute. Yet, travelers still see room for improvement in the US–101 visual environment. Visual management approaches such as improving ocean views, limiting commercial development to existing urban areas, and reducing roadside clutter (utility wires, billboards) are considered very important by a substantial proportion of travelers. Given that many

coastal travelers arrive from congested urban areas, maintaining a scenic, uncongested coastal corridor can meet traveler expectations and thus contribute to stable or increased penetration of primary visitor markets.

6. The demand for bicycle facilities on scenic byways is likely to increase.

The number of American adults who cycle regularly has more than doubled from 10 million riders in 1983 to 23 million in 1989. The number of those who tour or vacation by bike is increasing at a rate of 10% per year. Bike sales average about 10 million units annually. Since bicycle enthusiasts are frequently users of scenic corridors, the demand for additional bicycle facilities is likely to increase. Furthermore, regarding improvements to US-101, younger travelers are substantially more interested in adding bicycle lanes than are current older travelers, indicating a future demand for bike facilities as new traveler populations visit the coastal corridor.

7. Older travelers need special help and additional highway improvements when compared to other travelers.

Older travelers benefit from certain highway improvements, such as greater sign visibility and more frequent rest stops in rural areas. Travelers 55 or over also rely on signage more than younger travelers, particularly for rest areas, scenic turnouts, visitor information, and travel services. In addition, since many older travelers drive large recreation vehicles, scenic highway planners should consider design features such as wide shoulders and signage which warns of wind gust areas. Those 55 or over also rate passing lanes as the most important improvement for US-101, presumably because these travelers, especially those in RVs, wish to enjoy a slow travel pace and let others pass them by.

8. Attitudes toward highway aesthetics are changing as younger travelers place higher priority on environmental qualities than do older travelers.

Improvements to the US-101 roadside environment are rated as very important by a larger percentage of younger travelers compared to the over-55 age group. A majority of those in a young age group consider limiting commercial development to existing urban areas, and reducing the visibility of visual clutter (utility wires, billboards) to be very important improvements. A substantial proportion of younger travelers are also in favor of limiting rural roadside development and improving the attractiveness of commercial areas. Attracting younger travelers will require addressing these visual management concerns.

9. Residents place greater weight on the condition of the roads than do visitors who place somewhat greater value on the quality of the roadside environment.

Perhaps due to greater familiarity with the scenery while in transit to known

destinations, or because of a concern for efficient use of tax dollars, Oregon residents rate improvements to the roadway as more important than do nonresidents. Improvements favored by residents include better road maintenance, more passing lanes, and more turn lanes. Visitors are somewhat more interested in visual features such as improving ocean views, more scenic turnouts, and scenic route signing. This finding indicates that in order to attract visitors to the coast in the future, care must be taken to preserve the region's scenic qualities. Better maintenance and additional roadway improvements will keep residents satisfied with their trips to the coast. As indicated above, improvements that relieve congestion should improve coastal travel for all coastal visitors.

10. Repeat travelers are more likely to focus on roadway problems such as traffic congestion while considering scenic quality to be a given.

The more experience travelers have on the coast the more likely they will rate road improvements as very important. Improvements favored by experienced overnight travelers include passing lanes, turn lanes, bypasses around towns, and better road maintenance. In part this may be explained by travelers, who, having previously seen the scenery, tend to take the visual environment as a given and express more concern about the mechanics of travel down the roadway. However, given increasing traffic volumes on US–101, repeat travelers may also be experiencing increasing congestion and other types of driving stress, and accordingly are interested in improving or maintaining the quality of the US–101 experience.

11. The multi-state Pacific Coast Scenic Parkway corridor serves a vast diversity of functions and interests, and presents a unique and complex set of issues for scenic highway planning and development.

US–101 functions both as a recreational and scenic resource, as well as the primary transportation artery for coastal residents and businesses. Increased traffic on US–101 will have to be accommodated while simultaneously preserving the scenic and environmental qualities the visiting public has come to see. Development of US–101 as a scenic corridor is a complex multijurisdictional effort requiring the coordination of the activities of three state governments and a multitude of local governments and community interests. Oregon's approach to scenic corridor development utilizes strong land use planning laws, public ownership of coastal lands, a commitment to highway access control, and use of a variety of parkway and safety design features.

12. The total economic benefits of scenic highway development on US–101 are substantial.

Economic benefits of scenic highway development occur when highway improvements allow for increased traffic volumes and circulation while at the same time maintaining or enhancing the attractiveness of the area to coastal visitors. Without scenic highway improvements, highway service levels decline, affecting coastal businesses and

residents, or highway construction provides for increased travel volumes but at the cost of decreased attractiveness. This study's research indicates that scenic highway benefits range from an increase in visitor expenditures between $33 million and $81 million per year, depending on assumptions regarding coastal growth rates.

Recommendations

1. **Pursue development of the Parkway Concept and apply Parkway designs as the US–101 Improvement Strategy is implemented, in particular to urban and urbanizing areas.**

The Parkway Concept, as shown in the appendix, provides a framework for addressing travelers' concerns about visual management and traffic flow issues. The concept is particularly helpful because it applies specialized highway design approaches to urban and urbanizing sections of the coast. The concept recognizes that the coastal corridor has a diverse character and requires that the needs of commercial, recreational, and coastal resident travelers be served.

2. **In urban areas, employ visual management techniques such as underground utility lines, landscaped medians, and advertising sign control to enhance the visual appeal of these communities.**

Travelers indicate that there is room for improvement in making coastal communities as visually interesting and scenic as possible. In order to preserve the scenic character of coastal communities a variety of improvements, as suggested by travelers, can be applied.

3. **In urban areas, reduce congestion by employing highway design techniques such as turn lanes, multilaning and access management, or bypasses.**

Congestion in urban areas is the issue of most concern to the traveling public on the Oregon coast. Relieving traffic congestion through a variety of highway design approaches can help create a more relaxing and pleasurable experience for both resident and nonresident visitors to the coast.

4. **In rural areas, employ visual management techniques such as vegetation control and selective thinning to enhance existing scenic vistas; identify appropriate locations for additional scenic turnouts.**

Although scenic vistas are the highest rated attribute on the Oregon coast, this strength can be enhanced. In addition, a substantial proportion of surveyed travelers indicate that more scenic turnouts are a very important improvement.

5. **In rural and scenic areas, reduce congestion and improve traffic flow by utilizing highway design techniques such as passing lanes, limited access design, and channelization near scenic turnouts.**

Though traffic congestion in rural ares is a problem of less magnitude than in urban areas, congestion is nevertheless the issue with greatest need for improvement on the rural coastal corridor. Design features which can maintain smooth traffic flow, and in particular avoid congestion due to slow moving RVs, will improve the travel experience on rural sections of the highway.

6. **Consider the needs of special user groups, such as RV users, cyclists, and older travelers when developing US-101 design options.**

A variety of special interest groups, with specific highway design needs, use scenic byways. Highway design approaches for RV users include wide shoulders, passing lanes, additional warning distance for stops and roadway changes, and signage warning of wind gust areas. Those who bicycle tour desire wide, clean shoulders along the highway. Casual recreational riders may be well served by bike paths linking campgrounds, state parks, and other attractions.

Older drivers, who rely on signage to a great extent, need good sign visibility, particularly at night. An aging population, and increased bicycle and RV ownership, indicate that these users will become increasingly important scenic highway consumers, and as such merit specific attention.

7. **Consult with and/or sponsor a forum for local governments and community leaders regarding urban design and planning techniques which can be used to enhance the scenic character of coastal communities.**

Florence and Lincoln City, Oregon have already addressed visual management issues through the planning process. Other communities have expressed an interest in Parkway Concept design approaches but may not have the resources or information necessary to proceed. The findings of this report, in conjunction with the shared experiences of Florence and Lincoln City, may provide valuable information to planners and policy makers in other coastal cities. Coordinating the planning efforts of city and county governments regarding the US-101 scenic resource may be a helpful step in realizing an integrated coastal corridor.

8. **Identify alternate or loop routes which access US-101 and which are likely candidates for scenic designation and signing.**

Travelers frequently use scenic routes during pleasure trips. Roads with scenic qualities which can be accessed off of US-101 should be identified, designated, and signed in order to provide additional options for those interested in traveling scenic routes.

A system of alternate scenic roads can enhance the overall coastal corridor travel experience and perhaps relieve traffic congestion in areas were these routes can serve as an alternate to the highway.

9. Request federal government assistance in coordinating a comprehensive approach for the complex multijurisdictional Pacific Coast Scenic Parkway effort.

Three states and a multitude of local and county governments make the effort to develop a Pacific Coast Scenic Parkway a complex and difficult proposition. Yet the value of the coastal corridor as a national scenic resource is very substantial. While communication among the three states has occurred, its success has been limited. Active federal leadership in defining, designating, coordinating, and planning a scenic highway corridor would provide a vehicle for advancing a complex multijurisdictional effort like the Pacific Coast Scenic Parkway.

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APPENDIX A

PARKWAY CONCEPT

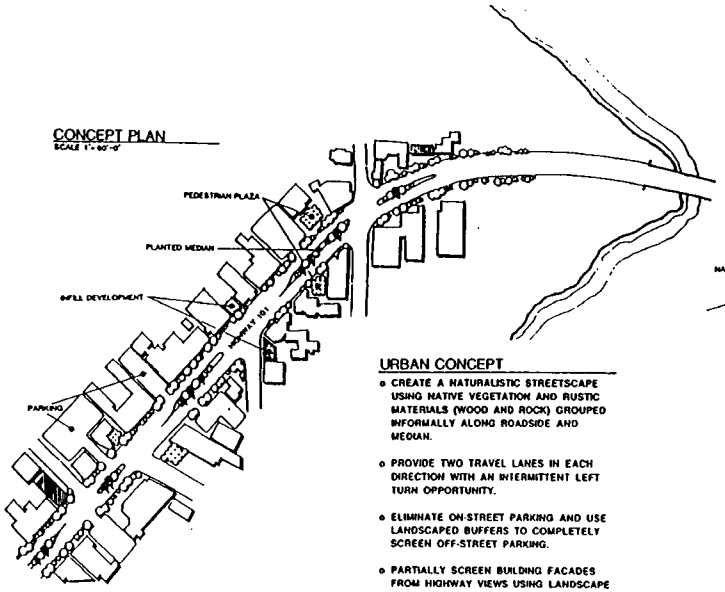
HIGHWAY 101
VISUAL MANAGEMENT STUDY
PARKWAY DESIGN CONCEPTS

URBAN - LINCOLN CITY

LINCOLN COUNTY, OREGON JUNE 1987

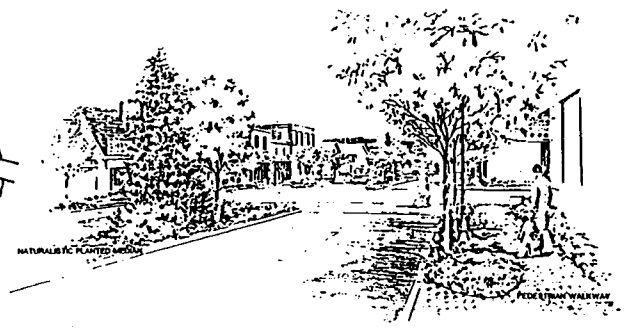
DAMES & MOORE

CONCEPT PLAN
SCALE 1" = 80' - 0"



URBAN CONCEPT

- CREATE A NATURALISTIC STREETSCAPE USING NATIVE VEGETATION AND RUSTIC MATERIALS (WOOD AND ROCK) GROUPED INFORMALLY ALONG ROADSIDE AND MEDIAN.
- PROVIDE TWO TRAVEL LANES IN EACH DIRECTION WITH AN INTERMITTENT LEFT TURN OPPORTUNITY.
- ELIMINATE ON-STREET PARKING AND USE LANDSCAPED BUFFERS TO COMPLETELY SCREEN OFF-STREET PARKING.
- PARTIALLY SCREEN BUILDING FACADES FROM HIGHWAY VIEWS USING LANDSCAPE BUFFERS.
- EMPHASIZE PEDESTRIAN SCALE CIRCULATION USING SPECIAL PAVEMENT AND CURVILINEAR SIDEWALK. PROVIDE AMENITIES INCLUDING SEATING AND LIGHTING.
- ENCOURAGE VISUALLY COMPATIBLE ARCHITECTURAL IMPROVEMENTS SUCH AS AWNINGS AND SIGNS.



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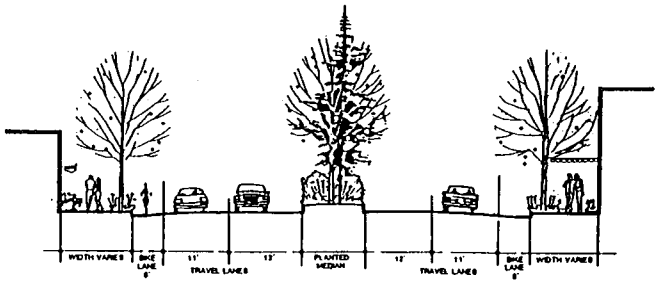
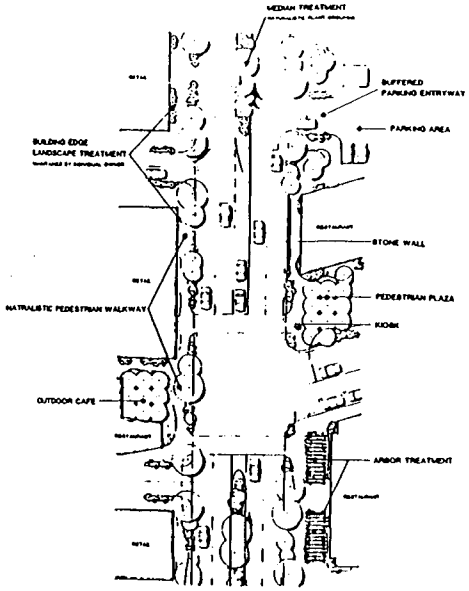
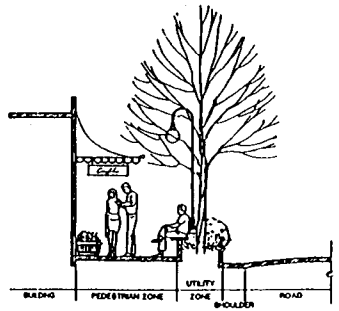


ELEVATION
SCALE 1" = 8' - 0"



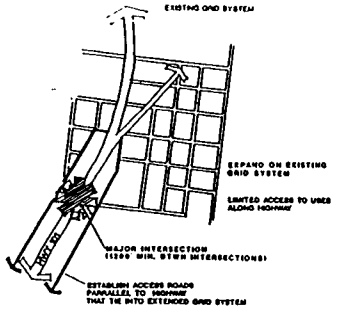
DETAIL CONCEPT PLAN
SCALE 1" = 20' - 0"



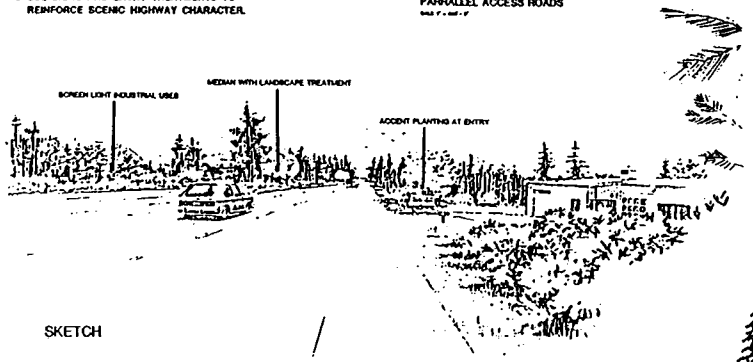
PEDESTRIAN ZONE SECTION
NOT TO SCALE

URBANIZING SECTION - CONCEPT

- UTILIZE NATIVE VEGETATION AND RUSTIC MATERIALS (WOOD AND STONE) GROUPED INFORMALLY ALONG ROADSIDE AND MEDIAN.
- PROVIDE TWO TRAVEL LANES IN EACH DIRECTION WITH INFORMALLY LANDSCAPED MEDIAN.
- LIMIT ACCESS TO HIGHWAY 101. POTENTIAL LIMITED ACCESS TREATMENT INCLUDES PARALLEL ACCESS ROADS BEHIND HIGHWAY FRONTAGE PROPERTIES THAT CONNECT TO EXISTING STREET NETWORK.
- USING SETBACKS AND LANDSCAPED BUFFERS, SCREEN LIGHT INDUSTRIAL USES COMPLETELY, PARTIALLY SCREEN RESIDENTIAL AND COMMERCIAL USES.
- USE SIGNS AND ENTRY TREATMENTS TO REINFORCE SCENIC HIGHWAY CHARACTER.



ACCESS
PARRALLEL ACCESS ROADS



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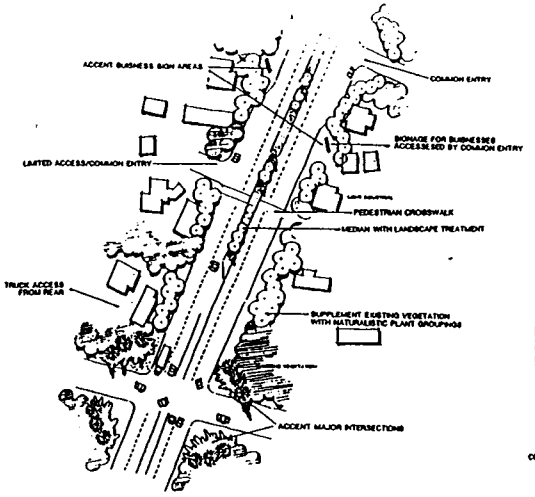
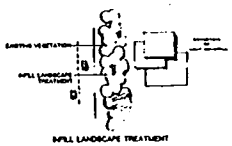
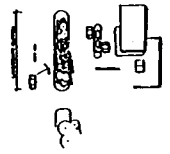
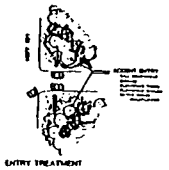
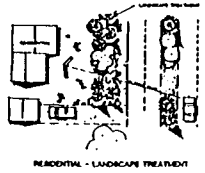


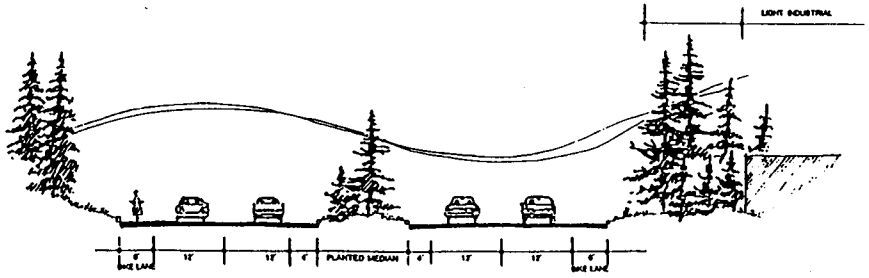
DETAIL



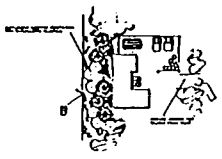








URBANIZING ELEVATION



HIGHWAY 101
VISUAL MANAGEMENT STUDY
PARKWAY DESIGN CONCEPTS

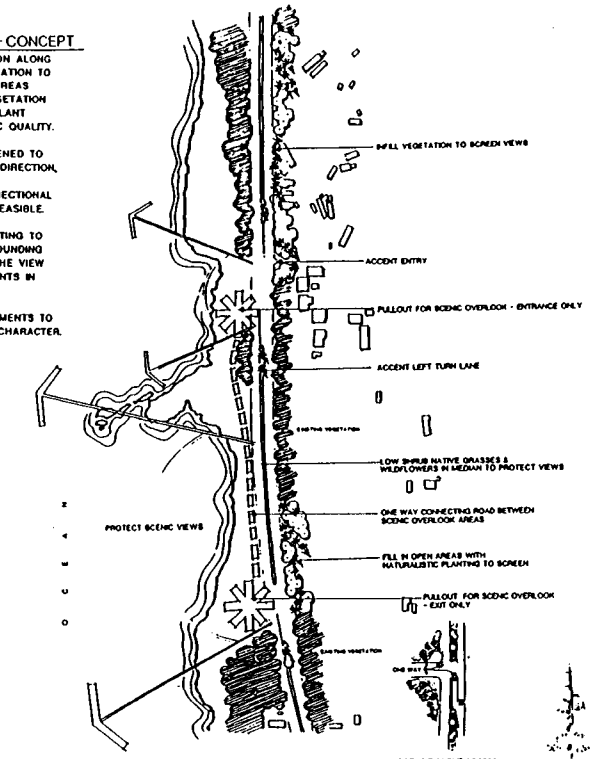
URBANIZING SECTION - NEWPORT SOUTH

LINCOLN COUNTY, OREGON JUNE 1987

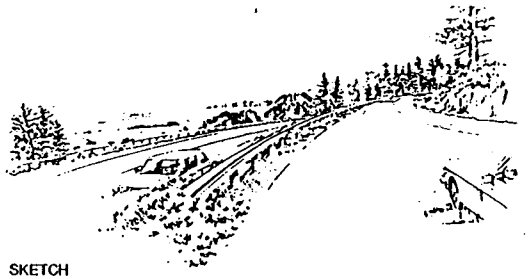
DAMES & MOORE

RURAL/SENIC SECTION - CONCEPT

- MAINTAIN NATURAL VEGETATION ALONG THE ROADSIDE. PRUNE VEGETATION TO MAXIMIZE SCENIC VIEWS. IN AREAS WHERE GAPS IN EXISTING VEGETATION OCCUR, INFILL WITH NATIVE PLANT MATERIAL TO IMPROVE SCENIC QUALITY.
- WHERE THE HIGHWAY IS WIDENED TO TWO TRAVEL LANES IN EACH DIRECTION, CREATE A NATURALISTICALLY LANDSCAPED MEDIAN AND DIRECTIONAL GRADE SEPARATION WHERE FEASIBLE.
- RESTRICT NATURALISTIC PLANTING TO GROUNDCOVER AND LOW / MOUNDING SHRUBS IN MEDIAN AND ON THE VIEW SIDE OF SCENIC ROAD SEGMENTS IN PRIMARY VIEW AREAS.
- USE SIGNS AND ENTRY TREATMENTS TO REINFORCE SCENIC HIGHWAY CHARACTER.



RURAL/SCENIC
SCALE 1" = 100' - 0"



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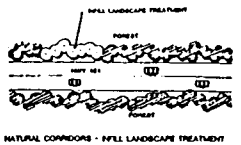
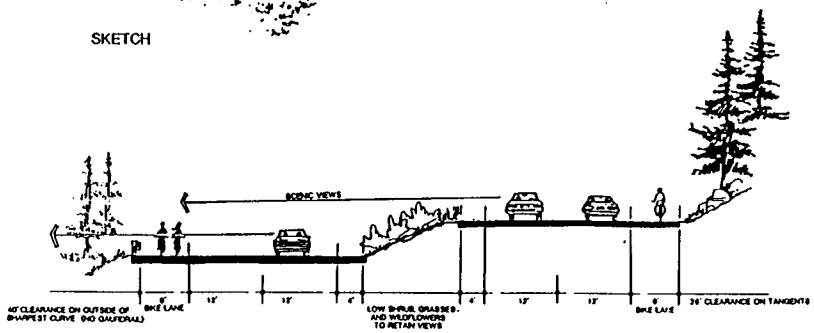
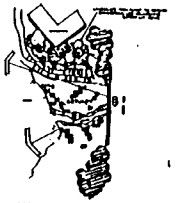


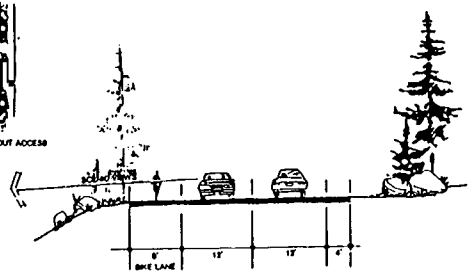
NATURAL CORRIDORS - INFILL LANDSCAPE TREATMENT



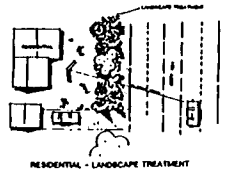
RURAL/SCENIC - SEPARATED GRADE
SCALE 1" = 8'-0"



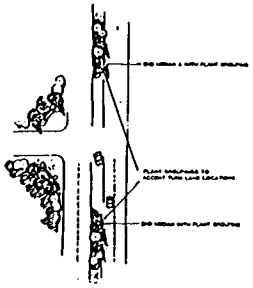
ESTUARY - LANDSCAPE TREATMENT



RURAL/SCENIC-TWO LANE
SCALE 1" = 8'-0"



RESIDENTIAL - LANDSCAPE TREATMENT



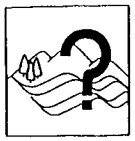
MEDIAN TREATMENT AT ENTRIES

HIGHWAY 101
VISUAL MANAGEMENT STUDY
PARKWAY DESIGN CONCEPTS

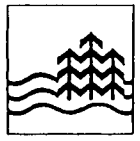
RURAL/SCENIC - SEAL ROCK

LINCOLN COUNTY, OREGON JUNE 1987 DAMES & MOORE

SCENIC OVERLOOK



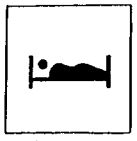
TOURIST INFORMATION



PARK ENTRANCE

CAMP SITE

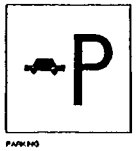
RESTAURANT



LODGING

TELEPHONE

RESTROOM



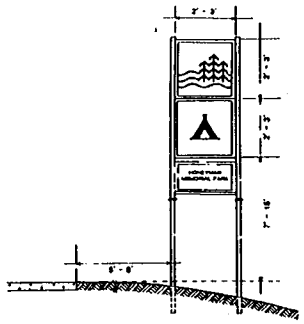
PARKING

GAS

BIKEWAY

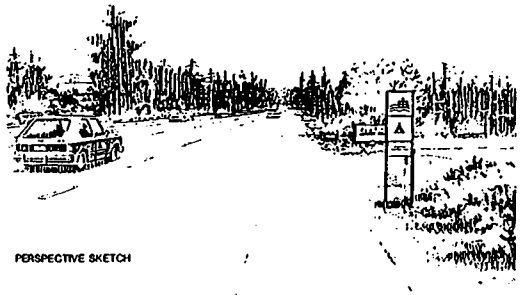
DEER CROSSING
(WARNING SIGN)

PARKWAY SIGN SYMBOLS



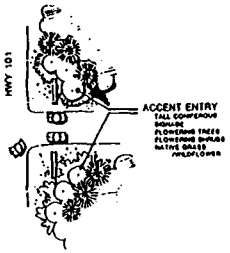
TYPICAL SIGN STRUCTURE

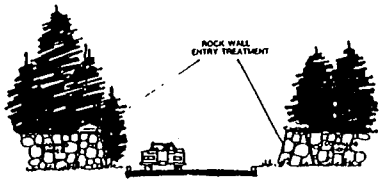
RURAL/SCENIC
ENTRY TREATMENT



PERSPECTIVE SKETCH

URBAN ENTRY ZONE TREATMENT





URBAN/URBANIZING ENTRY

HIGHWAY 101
VISUAL MANAGEMENT STUDY
PARKWAY DESIGN CONCEPTS

SIGNS & SIGN SYMBOLS

LINCOLN COUNTY, OREGON JUNE 1987

DAMES & MOORE

APPENDIX B

SURVEY INSTRUMENT

NEIL GOLDSCHMIDT
GOVERNOR

Department of Transportation

HIGHWAY DIVISION

TRANSPORTATION BUILDING, SALEM, OREGON 97310

Dear Traveler:

As someone who is traveling in Oregon you can help us by completing this questionnaire. Your answers will provide us with the information we need to better serve travelers within our state.

The Oregon State Department of Transportation is sponsoring this survey to gather information which is not available from any other source. Your response is very important for our planning. Your answers will be used for statistical purposes only and will be kept strictly confidential.

To express our gratitude for your help we will draw two respondents who will each receive a gourmet selection of Oregon foods.

Thank you for your assistance.

WIN A SELECTION OF GOURMET OREGON FOODS

By completing this questionnaire you may win a gourmet selection of Oregon foods, including fruit, chocolate, berry jam and nuts.

Two winners will be selected by random drawing and notified by 1 August 1990.

YOUR PREFERENCES FOR TRAVELING

1. Thinking in general about **pleasure trips** which you take, how important are each of the following for **creating the most pleasurable trip possible?** (Circle a number between 1 and 7, where 7 is most important)

	Not Important						Very Important	
arriving at your destination as quickly as possible	1	2	3	4	5	6	7	[3]
traveling through countryside or rural areas etc.	1	2	3	4	5	6	7	[4]
enjoying a leisurely pace during the trip	1	2	3	4	5	6	7	[5]
seeing dramatic scenic vistas	1	2	3	4	5	6	7	[6]
avoiding congestion and heavy traffic	1	2	3	4	5	6	7	[7]
encountering interesting places to see and experience	1	2	3	4	5	6	7	[8]
clean, well-maintained roads	1	2	3	4	5	6	7	[9]
being in a small town atmosphere	1	2	3	4	5	6	7	[10]
accessible recreation areas (eg., for camping or hiking)	1	2	3	4	5	6	7	[11]
convenient roadside services (eg., gas, food)	1	2	3	4	5	6	7	[12]
good signing for tourist attractions, historic areas, etc.	1	2	3	4	5	6	7	[13]

2. Thinking about your **trips for commuting to work or for business**, how important are each of the following for **creating the most pleasurable trip possible?** (Circle a number between 1 and 7, where 7 is most important)

	Not Important						Very Important	
arriving at your destination as quickly as possible	1	2	3	4	5	6	7	[14]
traveling through countryside or rural areas etc.	1	2	3	4	5	6	7	[15]
enjoying a leisurely pace during the trip	1	2	3	4	5	6	7	[16]
seeing dramatic scenic vistas	1	2	3	4	5	6	7	[17]
avoiding congestion and heavy traffic	1	2	3	4	5	6	7	[18]
encountering interesting places to see and experience	1	2	3	4	5	6	7	[19]
clean, well-maintained roads	1	2	3	4	5	6	7	[20]
being in a small town atmosphere	1	2	3	4	5	6	7	[21]
accessible recreation areas (eg., for camping or hiking)	1	2	3	4	5	6	7	[22]
convenient roadside services (eg., gas, food)	1	2	3	4	5	6	7	[23]
good signing for tourist attractions, historic areas, etc.	1	2	3	4	5	6	7	[24]

ABOUT YOUR TRIP IN OREGON

3. Is this your first trip to Oregon coast? [25]

(1) ☐ Yes (2) ☐ No

4. Do you plan to stay overnight **within Oregon** on this trip? [29]

(1) ☐ Yes (2) ☐ No

5. What is the **primary** purpose of this trip? (please check one only) [32]

(1) ☐ vacation/pleasure
(2) ☐ visit friends/relatives
(3) ☐ traveling to or from work
(4) ☐ business, conference or convention
(5) ☐ combination of business or conference with pleasure
(6) ☐ personal, family affairs or medical
(7) ☐ just passing through Oregon
(8) ☐ other (please specify) _____

6. How are you traveling on the Oregon coast today? [33]

(1) ☐ private auto
(2) ☐ rented auto
(3) ☐ RV or travel trailer rig
(4) ☐ tour bus
(5) ☐ motorcycle
(6) ☐ bicycle
(7) ☐ air
(8) ☐ other (please specify) _____

7. How many trips have you made to the Oregon coast during the past two years?

_____ number **day** trips [34-35] _____ number **overnight** trips [36-37]

8. How would you describe this trip? [38]

(1) ☐ left home primarily to come to the Oregon coast
(2) ☐ traveling to the Oregon coast as one of several destinations on this trip
(3) ☐ just passing through the Oregon coast on the way somewhere else

9. When you are on the Oregon coast today, how much time will you spend in each of the following? (fill in **percentage** for each, so that the total is 100%)

_____ [39] % inside a city or small town

_____ [40] % traveling on highway 101 and other coastal roadways

_____ [41] % in a state park, on the beach, or at another attraction

_____ [42] % other (please specify) _____

100 % Total

10. When traveling for vacation or pleasure in places like the Oregon coast, how often do you make stops along the way **because you see a sign?**

	Nearly Always (1)	Often (2)	Sometimes (3)	Never (4)	
highway rest areas	☐	☐	☐	☐	[43]
scenic turnouts or viewpoints	☐	☐	☐	☐	[44]
state parks or other recreation areas	☐	☐	☐	☐	[45]
historic sites or markers	☐	☐	☐	☐	[46]
commercial visitor attractions	☐	☐	☐	☐	[47]
visitor information centers	☐	☐	☐	☐	[48]
restaurants, lodging, auto service	☐	☐	☐	☐	[49]

11. For sections of highway 101 **inside cities or towns**, how would you rate the Highway with respect to each of the following? (Circle a number between 1 and 7 where 1 is "poor" and 7 is "excellent)

	Poor						Excellent	
arriving at your destination as quickly as possible	1	2	3	4	5	6	7	[50]
traveling through countryside or rural areas etc.	1	2	3	4	5	6	7	[51]
enjoying a leisurely pace during the trip	1	2	3	4	5	6	7	[52]
seeing dramatic scenic vistas	1	2	3	4	5	6	7	[53]
avoiding congestion and heavy traffic	1	2	3	4	5	6	7	[54]
encountering interesting places to see and experience	1	2	3	4	5	6	7	[55]
clean, well-maintained roads	1	2	3	4	5	6	7	[56]
being in a small town atmosphere	1	2	3	4	5	6	7	[57]
accessible recreation areas (eg., for camping or hiking)	1	2	3	4	5	6	7	[58]
convenient roadside services (eg., gas, food)	1	2	3	4	5	6	7	[59]
good signing for tourist attractions, historic areas, etc.	1	2	3	4	5	6	7	[60]

12. For sections of Highway 101 **which pass through scenic areas outside cities** or towns, how would you rate the Highway with respect to each of the following? (Circle a number between 1 and 7 where 1 is "poor" and 7 is "excellent)

	Poor						Excellent	
arriving at your destination as quickly as possible	1	2	3	4	5	6	7	[61]
traveling through countryside or rural areas etc.	1	2	3	4	5	6	7	[62]
enjoying a leisurely pace during the trip	1	2	3	4	5	6	7	[63]
seeing dramatic scenic vistas	1	2	3	4	5	6	7	[64]
avoiding congestion and heavy traffic	1	2	3	4	5	6	7	[65]
encountering interesting places to see and experience	1	2	3	4	5	6	7	[66]
clean, well-maintained roads	1	2	3	4	5	6	7	[67]
being in a small town atmosphere	1	2	3	4	5	6	7	[68]
accessible recreation areas (eg., for camping or hiking)	1	2	3	4	5	6	7	[69]
convenient roadside services (eg., gas, food)	1	2	3	4	5	6	7	[70]
good signing for tourist attractions, historic areas, etc.	1	2	3	4	5	6	7	[71]

13. Of the last **five times** you drove for **vacation or pleasure**, how many times did you drive a scenic route? (Check how many times **out of these five trips**)

	Number of Trips						
	None	1	2	3	4	5	
Drove an entire scenic route that **begins and ends at one place**	☐	☐	☐	☐	☐	☐	[72]
Drove a **scenic route** towards your destination **instead of a major highway**	☐	☐	☐	☐	☐	☐	[73]

14. What is the most important thing Oregon can do to improve the Highway 101 area for travelers such as yourself?

in urban areas: _____

_____ [74-75]

in scenic rural areas: _____

_____ [76-77]

15. If Oregon were to make additional improvements along Highway 101, what would be the most important to you?

	Very Important (1)	Somewhat Important (2)	Not Important (3)	
improve attractiveness of commercial areas	☐	☐	☐	[78]
more scenic turnouts	☐	☐	☐	[79]
add or improve highway rest areas	☐	☐	☐	[80]
additional bypasses around coastal towns	☐	☐	☐	[81]
better road maintenance	☐	☐	☐	[82]
more bike lanes	☐	☐	☐	[83]
improve ocean views from the highway	☐	☐	☐	[84]
more passing lanes	☐	☐	☐	[85]
reduce visibility of utility wires, billboards and roadside clutter	☐	☐	☐	[86]
more left and right turn lanes	☐	☐	☐	[87]
greater restrictions on roadside development outside of towns	☐	☐	☐	[88]
improve signing to recreation areas and historic attractions	☐	☐	☐	[89]
improve signing to scenic routes off the highway	☐	☐	☐	[90]
improve highway landscaping in towns	☐	☐	☐	[91]
improve highway landscaping outside towns	☐	☐	☐	[92]
limit new commercial development to existing urban areas	☐	☐	☐	[93]

ABOUT YOURSELF

16. What is your age? _____ [94-95]

17. Please check your highest education. [96]

(1) ☐ no high school diploma
(2) ☐ high school diploma
(3) ☐ some college or 2-year degree
(4) ☐ bachelors degree
(5) ☐ graduate degree

18. In what range was your total family income (before taxes) in 1989? [97]

(1) ☐ under $20,000
(2) ☐ $20,000 - $29,999
(3) ☐ $30,000 - $39,999
(4) ☐ $40,000 - $49,999
(5) ☐ $50,000 - $74,999
(6) ☐ $75,000 - $99,999
(7) ☐ $100,000 or more

THANK YOU FOR YOUR ASSISTANCE

Please fill in your name and address so we may contact you if you win one of the prizes. This survey is for research purposes only.

Name: _____

Address: _____ Phone: ( ) _____

City: _____ State or county: _____ ZIP: _____

[98-102]

APPENDIX C

U.S. 101 IMPROVEMENT STRATEGY

NEIL GOLDSCHMIDT
GOVERNOR

Department of Transportation
HIGHWAY DIVISION
TRANSPORTATION BUILDING, SALEM, OREGON 97310

* *

U.S. 101 STUDY - FINAL REPORT

In Reply Refer to
File No.:

November, 1988

* *

The State Highway Division has completed the US-101 Improvement Strategy. The Strategy is the first element of the US-101 Planning Study. It develops a comprehensive long range strategy for improvements to the route. The strategy will now be used to analyze the highway and recommend future improvements in the US-101 Corridor Study. The Corridor Study is the second element of the overall Planning Study. A copy of the US-101 Improvement Strategy is attached for your review.

PARKWAY UPDATE

Division planners presented the US-101 Parkway Concept at several public forums in July. The Parkway Concept was an outgrowth of ideas generated early in the Planning Study to tie US-101 together, to make it different than any other highway in the state, and to make improvements that would enhance and be compatible with the scenic wonders along its 350 miles. Each Parkway design is sensitive to the type of development along the highway, urban, suburban or urbanizing and scenic areas. The Oregon Parkway concept can increase the aesthetic experience, assist in access control and develop community identity along US-101.

The Division, responding to a request from Lincoln County, has announced plans to build a Parkway in the Lincoln Beach area. The project will also provide an application of the US-101 Parkway Concept residents, visitors, and local governments can evaluate for use in other locations. A two-mile stretch of the coast highway will be widened to have two lanes of traffic in each direction, with a landscaped medium, left turn pockets and landscaped sides. The widening and the left turn addition will improve traffic flow, safety and visual quality.

During 1989, the Highway Division will work on moving utilities off the site or placing utility lines underground, purchasing right of way and completing design work. A new approach using an interdisciplinary design team has been developed and includes a representative of Lincoln County. The project will be built in 1990.

For further information, please contact Robert Royer, Planning Engineer (378-8272); Don Byard, Plan Development Manager (373-7356); Tim Thex, Planning Analysis Engineer (378-3707); Bob Pool, Region 2 Engineer (378-2626); or Jim Gix, Region 3 Engineer (440-3399).

BC:rgdq

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PHASE II - PUBLIC MEETING	3
PHASE III - STRATEGY DEVELOPMENT.	4
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US-101 IMPROVEMENT STRATEGY

November, 1988

Introduction

The Oregon State Highway Division developed a long range Highway Plan in 1985 to guide construction and maintenance decisions on the State Highway System. The Division is in the process of applying the statewide guidelines from the Plan to smaller components of the State Highway System. A series of detailed studies called corridor studies will be used to apply these guidelines to specific corridors. The studies will serve to link long term highway planning efforts to specific project development activities in the Six-Year Highway Improvement Program. Corridor studies describe the nature, character, current and future needs of the route and delineate strategies to attain them. To date two corridor studies have been completed. The most recent is US-97 between the Washington and California borders, which was completed in January of this year. The first, OR-126/US-26 between Sisters and Vale, Oregon was completed in March of 1986.

The Oregon Coast Highway is the next logical corridor to be studied because of its unique and complex character. It is perhaps the only statewide route all Oregonians feel they have a vested interest in. The differences in land use, user groups, and environmental factors, along with a large proportion of current deficiencies, point to the necessity for an overall plan or strategy to guide highway improvement decisions.

The historical development of the Oregon Coast Highway has followed a segmentized approach. In the year 1918, segments of highway existed between Astoria to Neskowin and North Bend to the California Border. A road connecting these two cities was part of a system of State highways proposed by the Oregon State Highway Commission of that time. Until 1931, US-101 was known as the "Roosevelt Coast Military Highway." During 1931 the Commission renamed it the "Oregon Coast Highway." The corridor was completed as a through route in 1932 with ferry service utilized to cross Alsea Bay, Yaquina Bay, the Siuslaw River, the Umpqua River and Coos Bay. Bridges across these obstacles were completed by 1936.

This type of segmentized development fails to view the highway as a total entity. The corridor needs to be viewed as a whole in relationship to function in order to develop a comprehensive corridor improvement strategy.

A recent proposed highway improvement project in the Lincoln Beach area also demonstrates the need for a plan to guide future improvements to the highway. The project began as a request for a left turn refuge and grew to a five lane improvement because of projected 20 year traffic usage patterns. At the project hearing 1/3 of the testimony favored a 5 lane alternative, 1/3 favored a 3 lane alternative, and 1/3 favored a no build or do nothing approach.

The Lincoln Beach Project hearing results, along with US-101 inventory information were presented to the Transportation Commission at their November, 1987, workshop in Astoria. This presentation highlighted the complexities of differing user groups, varied land use and traffic patterns, and environmental, geologic, and historic considerations. Twenty year highway improvement needs, with an estimated 500 million dollar cost, which exceeds current funding levels, were also presented.

Highway Division staff recommended that a strategy be developed to focus improvements and available funds. The US-101 Improvement Strategy would be the first component of the US-101 Planning Study followed by a detailed corridor study. The US-101 Improvement Strategy would be developed from an analysis of inventory and traffic data along with input from coastal residents. Input and coordination with other state agencies and coastal cities and counties would also be sought.

The Commission directed the planning staff to present a number of alternatives to the public in order to give them a base on which to react. The commissioners also emphasized that the alternatives should address the entire highway and be coupled to general types of improvements, which might be possible in each area. The public meetings were to be held in four coastal cities during January, 1988.

PHASE I - DATA GATHERING

Four improvement strategy alternatives were developed for public review. These alternatives were skeletal in nature. They were designed to stimulate thought and discussion and to address the highway as a whole. Individual highway improvements were not included. Each of the alternatives employed varying levels of service and possible types of improvements to the zones identified.

The four alternative strategies are Status Quo, Dispersion, Urban/Economic, and Tourism. The following is a brief explanation of each alternative.

Status Quo

In this alternative strategy, improvements to US-101 are evaluated on a project by project basis with those having the greatest current need given top priority. It relies on the Six-Year Highway Improvment Program process to determine needs and priority. The level of service is the same for the whole highway. The Highway Plan statewide levels of service are used to define deficient highway sections. There is no differentiation in improvement type other than meeting the projected traffic demand for the 20 year design life of the project. In summary, the Oregon Coast Highway is treated like any other statewide highway.

Dispersion

This alternative is more theoretical in nature and evaluates improvements by their proximity to coastal feeder routes and traffic volumes. It proposes that higher levels of service and higher order improvements be applied where US-101 intersects its feeder routes. These higher level of service zones would continue for sufficient distances to accommodate the high traffic volumes. Higher orders of improvements such as bypasses and five lane sections would be applied in higher level of service zones, while improvements such as passing lanes or addition of shoulder width would be applied to the lowest zone. This alternative divides the corridor into three improvement zones, Maximum, Standard, and Limited.

Urban/Economic

In this alternative, improvements to US-101 are evaluated in relationship to major cities, and areas of recognized economic activity along with connections to feeder routes. It proposes that higher levels of service and higher order improvements be applied in major cities and areas of recognized economic activity. This alternative concentrates improvements where coastal residents live and work, and also supports access to the three deep water ports.

Tourism

This alternative would improve access to major scenic and tourist areas. It recognizes that ocean view portions of the highway are world class scenic destination points or major tourism areas. It focuses improvements on the highway sections between these attractors by providing higher levels of service and higher orders of improvements. It would also preserve and enhance scenic areas by providing special improvement types.

PHASE II - PUBLIC MEETING

These four alternatives were presented at public meetings at the following locations and dates.

Gold Beach - January 11, 1988
Coos Bay - January 12, 1988
Cannon Beach - January 19, 1988
Lincoln City - January 21, 1988

In all, over 200 people gathered to listen and comment on the four strategy alternatives. In addition, 64 written comments and suggestions have been received. The meetings were very informative and provided a positive forum to gather input for future improvements of the Oregon Coast Highway. Of the four alternatives, Urban/Economic and Tourism addressed the concerns of most who attended and commented.

The participants in Gold Beach and most in Cannon Beach favored the tourism with its focus on preserving scenic zones and improving access to them. In Coos Bay strengthening the link between the ports and the valley was the over riding theme. Therefore, Urban/Economic was their choice, although, they were also concerned about preservation of scenic sections. The Lincoln City meeting was dominated by project oriented discussions. None of the alternatives were favored over the others but specific improvement types such as additional passing lanes and bypass solutions were favored by the majority who attended.

The following specific types of highway improvements were also recommended by the public at all of the meetings.

- Better signing
- Vegetation control/selective thinning to open scenic vistas
- Expand definition of scenic zones
- Feeder route need to be addressed
- Left/right turn refuges at scenic turn-offs and parks
- Better and more bicycle facilities
- More passing lanes
- More vistas and turn-outs at scenic locations
- Protection of scenic areas
- Need coordination with regional strategies

Of these, more passing lanes and vegetation control were the most frequently recommended improvement types. The majority of these improvements will be addressed in the concept or needs sections of the Corridor Study and not in the strategy report.

On the whole the majority of the people understood the evaluation methodology employed in each of the alternatives. The alternatives were focused to direct certain types of improvements to specific areas or sections of the corridor. The public commented about the location of the zones, but there was relatively little comment, and we feel understanding, about which types of improvements would best solve capacity problems within each zone. The staff referred to various types of improvements, i.e. 5 lane section, 4 lane section, 3 lane sections, etc. throughout the presentation and how each might address the needs in various zones. One of the specific improvements types introduced was a very generic parkway design. The planning staff felt a parkway in some areas could best handle and address the need to beautify the highway, maximize its visual quality potential and assist in access control in developing and urban areas. More attention to explanation of improvement types and their benefits will be included in future meetings.

Shortly after the conclusion of the public hearings, the Land Conservation and Development Department (LCDD) sponsored a Visual Management Study in Lincoln County. The purpose of the study was to delineated areas and types of visual management that should take place adjacent to US-101. A consultant was hired by Lincoln County and the cities of Newport and Lincoln City through a grant from LCDD. The study developed a methodology to evaluate visual qualities and identified areas and types of visual management, such as vegetation thinning or buffer zones along the highway. It produced a model that can be used by other communities along US-101.

The Division saw an opportunity to apply the methodology and skills involved in the study to development of an Oregon Parkway Concept. The staff also saw an opportunity to define and clarify what a parkway is in various environments. The consultant contract was expanded to include this task. They developed an Oregon Parkway concept for urban, suburban and rural roadway types. The Oregon Parkway Concept was presented to the public in mid-summer.

PHASE III - STRATEGY DEVELOPMENT

The goal in development of an improvement strategy is to:

- incorporate inventory and functional data with public input.
- address the highway as a total entity.
- preserve and enhance scenic and aesthetic qualities.
- focus improvements to best utilize funding
- address the 20 year time frame with a realistic plan that has a reasonable degree of attainability.
- provide a planning base for the following detailed corridor analysis.

The best strategy to accomplish this goal is a combination of the Urban/Economic and Tourism Alternatives with Levels of service and improvement types consistent with function. It pulls the population centers and economic areas from the Urban/Economic Alternative and the scenic areas from the Tourism Alternative. The remaining section of the corridor form connectors between these areas and coastal feeder routes. This combination is named the US-101 Improvement Strategy (see Map 1, page 6) and is defined by the following criteria:

US-101 IMPROVEMENT STRATEGY

Improvement Zone	Acceptable LOS	Improvement Types
Maximum - Urban	A-D	5 lane, Parkway, Bypass
Rural	A-C	4 lane, Parkway
Standard - Urban	A-D	3 lane (continuous left turn), Parkway
Rural	A-C	3 or 4 lane passing section, Parkway
Limited - Urban	A-D	2 lane, Parkway
Rural	A-E	2 lane, Scenic Section, and 3 or 4 lane passing section, Parkway, Scenic Bypass

Maximum Improvement Zones

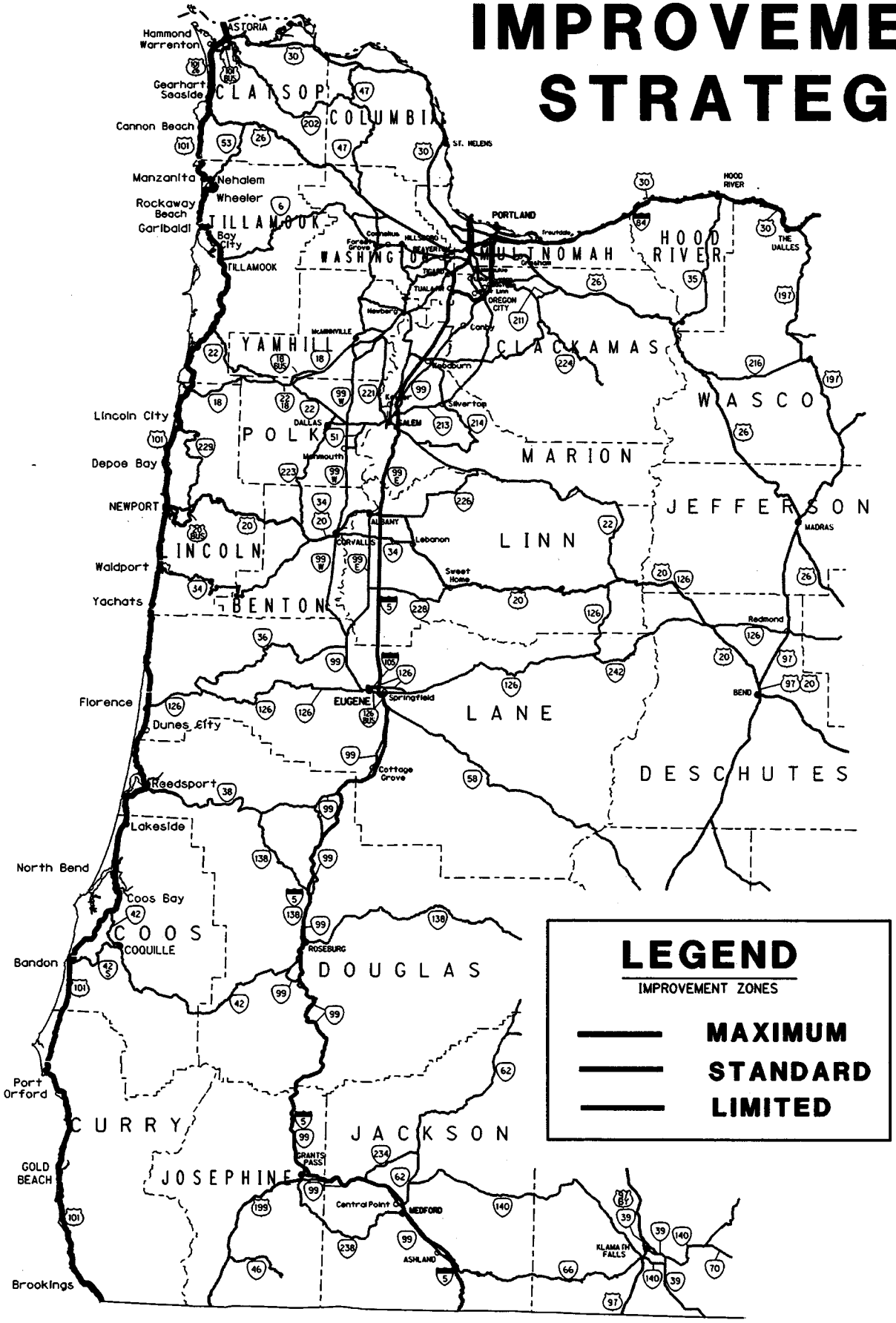
Maximum Improvement Zones, from the Urban/Economic alternative, incorporate recognized areas of urban and economic importance. Different levels of service are applied to urban and rural areas within this zone. These are consistent with Oregon Highway Plan guidelines for highways of statewide level of importance. These evaluation levels of service are A-D in urban and A-C in rural. Once the level of service falls below these ranges a deficiency or need for an improvement is created. In this zone the improvement type to correct deficiencies will be of the highest order. In urban areas parkways, five lane section, or bypasses will be considered. In rural areas parkways or four lane sections will be used.

Limited Improvement Zones

Limited Improvement Zones evolved from the Scenic Zones in the Tourism Alternative. They incorporate areas with direct visual access to ocean, estuary or mountain related views and vistas. These areas have world class scenic value which can be duplicated only in a few other states or countries. They are attractors or major destination points. Tourists and Oregonians alike drive these areas to enjoy them from the comfort of their car or to participate in the many activities associated with their magnificent scenic qualities.

During the public meetings, comments regarding expansion of the scenic zones were suggested. The staff acknowledged that the whole highway is scenic, but there are different levels. A number of recreation/scenic classification systems developed in other studies were reviewed, but did not fit our focus. The Scenic Zones defined for the purposes of this strategy are of national magnitude. The highway must also support the coastal economic needs by providing an efficient through traffic function. Highway improvements to this zone must be approached differently because of the narrowness of the corridor (the Pacific Ocean on one side, mountains or headlands on the other), historic and scenic values, and the high cost of providing these improvements. The term "Limited Improvement Zone" is an area where highway improvements must fit into and have a positive impact on the scenic values.

US 101 IMPROVEMENT STRATEGY



Widening of the highway will not be the prime goal within this zone. Instead operational improvements which assist traffic flow and facilitate maximum enjoyment of the zone's outstanding scenic qualities will be stressed. These improvements include left and right pockets, expansion and channelization of scenic pull offs, and improved signing. Rural areas will be evaluated at level of service A-E. Where widening improvements are possible, 3 lane or 4 lane passing sections may be appropriate. Also, scenic bypasses alternatives may be explored in order to preserve the outstanding scenic qualities of the existing corridor. Very few urban areas lie within this zone. Urban areas will be evaluated at level of service A-D with improved 2 lane or parkway design being the improvement type.

Standard Improvement Zones

Standard Improvement Zones incorporate the remaining sections of the corridor. These sections of the corridor move traffic between scenic zones and/or maximum improvement zones. The evaluation level of service is the same as the maximum improvement zones (level of service A-D in urban areas and A-C in rural areas). Improvement types are parkways or 3 lane (continuous left turn) in urban areas and parkways or 3 or 4 lane passing sections in rural areas.

The major emphasis of improvements is to supply passing opportunities where needed. Passing lanes will be provided every five miles in each direction to eliminate deficiencies as they occur. Length and type of the passing lanes will be determined during project development based on traffic and terrain analysis.

The US-101 Improvement Strategy was presented to the Transportation Commission at its May, 1988 meeting. They directed the planning staff to present it to the public for review and comment. Public forums were held in five coastal and four inland communities during July, 1988. Copies of the strategy were mailed prior to the forums, to local governments and all who attended the first round of public meetings.

PHASE IV - FINAL REPORT

Public Forums

The US-101 Improvement Strategy was presented at public forums in the following communities:

Seaside	- July 12, 1988
Newport	- July 13, 1988
Tillamook	- July 19, 1988
Reedsport	- July 20, 1988
Salem	- July 21, 1988
Brookings	- July 26, 1988
Grants Pass	- July 27, 1988
Eugene	- July 28, 1988
Beaverton	- August 3, 1988

In addition, the Planning Staff presented the US-101 Parkway Concept at these forums. Three Oregon Parkway designs were developed by a consultant in conjunction with an LCDC sponsored Visual Management Study in Lincoln County. The Parkway Concept was an outgrowth of ideas generated early in the Planning Study to tie US-101 together, to make it different than any other highway in the state, and to make improvements that would enhance and be compatible with the scenic wonders along its 350 miles. Each Parkway design is sensitive to the type of development along the highway, i.e.; urban, suburban or urbanizing, and scenic areas. The Oregon Parkway Concept is an alternative for future highway improvements. It would increase the aesthetic experience, assist in access control and develop community identity, particularly in urban and urbanizing areas along the corridor.

Approximately 190 citizens gathered to listen and comment on the US-101 Improvement Strategy and Parkway concept. The vast majority of the comments received were favorable and supportive. Representatives from Tillamook County attended the first three coastal meetings to express concern over the size of the limited improvement zone between Arch Cape Tunnel and Bay City. They also pointed to the section south of Tillamook between Simmons Creek (MP 71.7) and Brooten-Pacific City Road (MP 90.37) as an example of basic highway improvements not being met.

The location of improvement zones between Arch Cape Tunnel and Bay City were adjusted based on their input. Also, preliminary cost estimates were revised to reflect these changes along with the addition of reconstruction cost for the highway south of Tillamook.

The Oregon Parkway concept also received favorable comments, with many communities looking forward to this type of future highway development. Maintenance of parkway vegetation drew a number of questions. This issue will be addressed during Parkway project development.

The meetings in Seaside and Tillamook were dominated by project and location comments, while the other meetings tended to focus on the highway as a whole. Project and location specific comments will be addressed in the Corridor Study along with the following highway improvement suggestions from the meetings.

- Better signing
- Vegetation control/selective thinning to open scenic vistas
- Better and more bicycle facilities
- Protection of Scenic Areas
- Quicker project implementation
- Coordinate with regional strategies

The strategy divides the highway into improvement zones, based on function and usage. It then applies different types of improvements to each zone to handle current and future deficiencies and focus available funding. With the exception of the improvement zone location within Tillamook County the response to the strategy was very positive. Based on these public forums, a coastal concensus favoring implementation of the strategy has been achieved. The US-101 Improvement Strategy criteria on page 5, the US-101 Improvement Strategy map on page 10, along with Table 1 showing the specific mile points of the zones, represents this concensus.

The inland meetings were poorly attended with only 12 people at eight meetings and, therefore, difficult to draw a conclusion. The strategy has also been presented to other state agencies such as the Economic Development Department and the Land Conservation and Development Commission and its staff, to coastal organizations such as the Oregon Coast Association and Oregon Coastal Zone Management Association, Inc. and to a number of Rotary Clubs. All these groups supported both the conclusions and proactive approach of the US-101 Improvement Strategy.

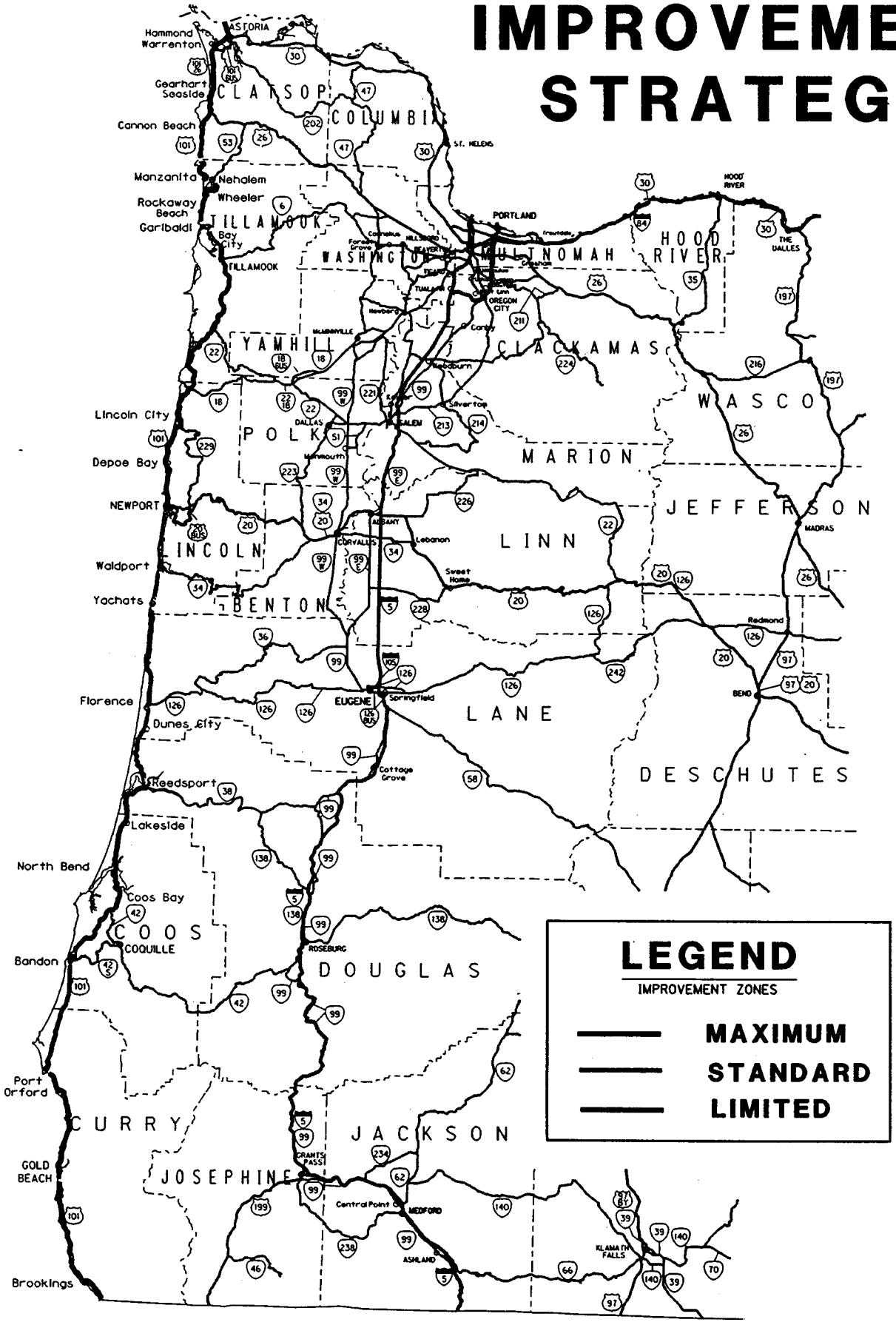
Corridor Study

The US-101 Improvement Strategy was presented to the Transportation Commission at the October 18, 1989 meeting. The strategy will now be applied to the highway in the US-101 Corridor Study.

The corridor study will describe the nature and character of a highway by analyzing traffic characteristics, capacity, alignment, width, accidents, pavement condition, off right-of-way activities and economic development plans. Oregon Highway Plan guidelines and the US-101 Improvement Strategy will be used in analysis of the corridor. Highway problems and needs, both existing, mid-range (10 years) and future (20 years), will be identified and specific project solutions recommended. Cost estimates will be provided for the identified improvements in order to help evaluate allocation of available funds. The US-101 Corridor Study will act as the initial step in moving conceptual projects into the development and environmental stages via the Six-Year Highway Improvement Program process.

Throughout the development of the US-101 Improvement Strategy public and local governmental input was sought and utilized. This proactive planning approach will be continued in the corridor study through the formation of Study Advisory Task Force Groups. These will be composed of representatives from cities, counties, Ports and Council of Governments. They will supply economic, land use, and project base data and review study drafts. The study will be completed in March of 1989 with copies of the Executive Summary mailed to all interested parties.

US 101 IMPROVEMENT STRATEGY



US101 IMPROVEMENT ZONES

TABLE 1

Beginning MP	End MP	Total	Zone	Description	Comment
0.00	25.46	25.46	Maximum	Astoria Br. to Cannon Beach Jct.	Astoria Gearhart Seaside
25.46	36.86	11.40	Standard	Cannon Beach Jct. to Arch Cape Tunnel	
36.86	42.84	5.98	Limited	Arch Cape Tunnel to Nehalem Rd.	
42.84	45.56	2.72	Standard	Nehalem Rd. To Nehalem Bridge	
45.56	Z46.88	5.58	Limited	Nehalem Bridge to Jetty Creek	
Z46.88	53.79	6.91	Standard	Jetty Creek to Cedar Rd.	
53.79	54.93	1.14	Limited	Cedar Rd. to West Garibaldi C.L.	
54.93	56.99	2.06	Standard	W. Garibaldi C.L. to Miami R. Br.	
56.99	59.21	2.22	Limited	Miami R. Br. to N. Bay City L.	
59.21	64.23	5.02	Standard	N. Bay City L. to Wilson R. Br.	
64.23	66.43	2.20	Maximum	Wilson R. Br. to South Couplet	Tillamook
66.43	105.09	38.66	Standard	S. Couplet to Otis Jct.	
105.09	141.53	36.44	Maximum	Otis Jct. to Yaquina Br.	Lincoln City Depoe Bay Newport
141.53	154.03	12.5	Standard	Yaquina Br. to Legion Rd.	
154.03	156.36	2.33	Maximum	Legion Rd. to S. Waldport C.L.	Waldport
156.36	165.49	9.13	Standard	S. Waldport C.L. to S. Yachats C.L.	
165.49	182.29	16.8	Limited	S. Yachats C.L. to Herman Park Rd.	
182.29	187.24	4.95	Standard	Herman Park Rd. to Heceta Beach Rd.	
187.24	190.98	3.74	Maximum	Heceta Beach Rd. to Siuslaw R. Br.	Florence
190.98	211.42	20.44	Standard	Siuslaw R. Br. to Umpqua R. Br.	
211.42	244.02	32.60	Maximum	Umpqua R. Br. to OR42 Jct.	Reedsport Coos Bay North Bend
244.02	260.64	16.62	Standard	OR 42 Jct. to Simpson Creek	
260.64	274.70	14.06	Maximum	Simpson Creek to Gross Creek	Bandon
274.70	298.58	23.88	Standard	Gross Creek to Knapp Rd.	
298.56	301.48	2.9	Maximum	Knapp rd. to S. Port Oxford C.L.	Port Oxford
301.48	326.47	24.99	Limited	S. Port Orford C.L. to Knox Interchange	
326.47	330.48	4.01	Maximum	Knox Interchange to Hunter Creek	Gold Beach
330.48	354.37	23.89	Limited	Hunter Creek to Dear Park Dr.	
354.37	363.11	8.74	Maximum	Dear Park Dr. to California Border	Brookings

Total Maximum Zone Miles = 132.48
Total Standard Zone Miles = 154.29
Total Limited Zone Miles = 80.60
367.37 Miles

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